JUSTIS Information System for the District of Columbia

Phase 3 Project file

Notification Services Design

Document History	
Document Filename:	NOT_Design_Document_v6
Document Type:	Notification Services Design Document
Document Status:	Prepared for ITLO Review
Time of Last Update:	12/2/2002 5:13 PM
Project Name:	DC JUSTIS Notification
Contract Number:	DC-C-920-S-065
Document Purpose:	This document details the detailed design of the JUSTIS Notification Services Functionality
Revision History	9/12/2002 – Draft for ITLO review 9/25/2002 – Inclusive of ITLO revisions.

BearingPoint
Formerly KPMG Consulting

Table of Contents

1. Introduction

1.1 Purpose of This Document

This document is one of a series of documents that describes the District of Columbia's Justice Information System (JUSTIS). In particular, this document describes the design specifications for a notification system that would add a powerful and innovative solution to the current JUSTIS system. This system is known as Notification Services.

The design specifications herein are supplemented by a description of the events leading up to the specifications development. These topics include the issues that prompted the need for Notification Services, stating the goals of the work order to build the system, and describing the process of defining the system requirements. A comprehensive list of the resulting requirements is also provided.

The design specifications are then described in detail with graphical representation of the system architecture. The system design is broken down into three major parts: conceptual design, logical design, and physical design. Conceptual design focuses on the requirements of the system. Logical design describes the methodology used to meet the requirements, including data sequence diagrams, data sources, and outputs. Physical design shows detailed high-level processes of the logical design and describes the tools used to carry out the processes. Screen shots of a proposed user interface with descriptions of the end user functionalities are also included.

1.2 Audience

The intended audience for this document includes JUSTIS management, systems support personnel, and participants in the development of the requirements for Notification Services. The nature of the information is somewhat technical, but also includes general descriptions of the system's design. Therefore, a technical background is not necessary to understand the content, but it is helpful.

1.3 Document Maintenance and Security

This document is a design document that addresses specifics of the technical architecture. It is written to provide the Information Technology Advisory Committee (ITAC) a description of the conceptual, logical, and physical design of the JUSTIS Notification Services solution. There will be no maintenance or revisions unless the implementation of the design is executed.

This document contains specific criminal justice data and should not be made public. The reader is strongly encouraged to take reasonable precautions in securing the document and the data herein.

2. Notification Services Background

2.1 What is Notification Services?

Notification Services is the process and function that will provide criminal justice administrators with timely information on specific events, giving them the ability to make the best decisions possible. This document defines and describes the processes that will make up Notification Services.

Notification Services supports the concept of operational efficiency by decreasing the time it takes for data to flow from a data source to a specified destination. The key to Notification Services is that the data transfer happens automatically, and is customized by the end user to fit their unique needs. Users of Notification Services will be able to choose the data that they receive, and where they receive it. In the end, business operations progress with greater ease as a result of Notification Services.

2.2 The Need for Notification Services

Notification Services is part of the original JUSTIS Blueprint description of a comprehensive proposal for an updated criminal justice information system. Prior to JUSTIS, the DC criminal agencies had independent systems that were difficult to access and often did not communicate with each other. Individuals such as parole officers, police officers, and public defenders struggled to get the accurate information that they needed to do their jobs. Notification Services extends upon current JUSTIS functionalities such as the Inquiry Application, Core Data Transfer, and Data Quality Alliance.

2.3 System Objectives

JUSTIS was developed under the guiding principle to provide accurate, timely, and complete mission critical information to the DC criminal justice agencies without replacing their current operational systems. Notification Services advances this goal by leveraging current legacy systems to provide criminal justice administrators with improved access to information.

JUSTIS users will be able to subscribe to specific events and will be contacted when the specified events occur. The proposed design takes full advantage of each agency's system by combining modern technology with the current operating environment to create a value-added solution.

The vision for Notification Services was developed and approved by the Information Technology Advisory Committee (ITAC). The following statement is taken directly

from the statement of work (SOW) for the Notifications Services Specification delivery order:

> *The Notification System requirement for Phase 2 has been carried to Phase 3. The notification functionality allows an individual user to identify a particular offender and request the JUSTIS system, upon receipt of certain data, to pass that data to the requesting user via an electronic notification.*
>
> *Events in one agency's processing of an offender that might be of interest to personnel in other justice agencies might include:*
>
> - *A new arrest*
> - *An escape*
> - *Change of the assignment of the prosecutor, the Public Defender*
> - *Change of court date*
> - *Disposition of a trial*
> - *Release from incarceration*
> - *Issuance of a warrant*
>
> *The notification system is required to provide facilities by which a user may identify an offender, one or more events, the number of occurrences, a specific length of time, and a notification delivery method. JUSTIS would accept the request and monitor reports from each participating agency. Should such an event involving the specific offender be reported, JUSTIS would send a notice to the requesting user. A good Notification System is no better than the individual agency legacy systems upon which it depends. As a consequence, the timeliness and accuracy of Notifications ultimately are the responsibility of the contributing agencies. The final design of the Notification System will be the joint responsibility of the contractor and an ad hoc ITAC Working Group.*

The current Notification Services design grew from the above statement. Although the statement of work formed the basis for developing Notification Services, these goals were expanded through more in depth research and consideration of the agencies' requirements. The potential of the notification application was discussed in depth with JUSTIS management and agency representatives in an open forum known as Joint Application Development sessions.

3. Design Process

3.1 Joint Application Design (JAD) Sessions

In order to accurately address the needs of the agencies and users, a series of Joint Application Design (JAD) sessions were held. These JAD sessions served as an open forum for participating agencies to impact the design of Notification Services. Several members of each participating JUSTIS agency were invited to discuss Notification Services and encouraged to take ownership of the system by contributing to its development. In addition, each JAD session attendee served as a representative of their agency and therefore was encouraged to offer the perspective of their agency and how Notification Services could best suit their needs. A complete list of attendees with contact information is shown in the Appendix, section 10.1.

JAD sessions were held once a week, for five consecutive weeks in order to cover all relevant topics. Attendees were supplied with binders and a copy of the notes from the each week's session. The JAD sessions were scheduled to focus on a different aspect of the system each week, but all areas of design were open for discussion throughout the 5 sessions. A complete set of the resulting notes is shown in the appendix, sections 10.2 through 10.6.

Upon completion of the JAD sessions, a set of requirements was compiled as well as a Hypertext Markup Language (HTML) user interface, which is shown in sections 4 and 6.4 respectively. The interface was designed in accordance with web design standards as set forth by the Office of the Chief Technology Officer (OCTO).

3.2 Technical Design Approach

A technical design was considered that would support the determined requirements. From the beginning of the technical design process, Notification Services began with a foundation formed by the current operational systems in each agency and the current JUSTIS functionality.

As mentioned in section 2.2, the system would leverage current operational systems, rather than replace them. Also, since Notification Services is part of the currently operating JUSTIS solution, the design is able to take advantage of a successful infrastructure built to accommodate notification functionality.

Below is a diagram highlighting the major steps taken to reach the formal design of Notification Services.

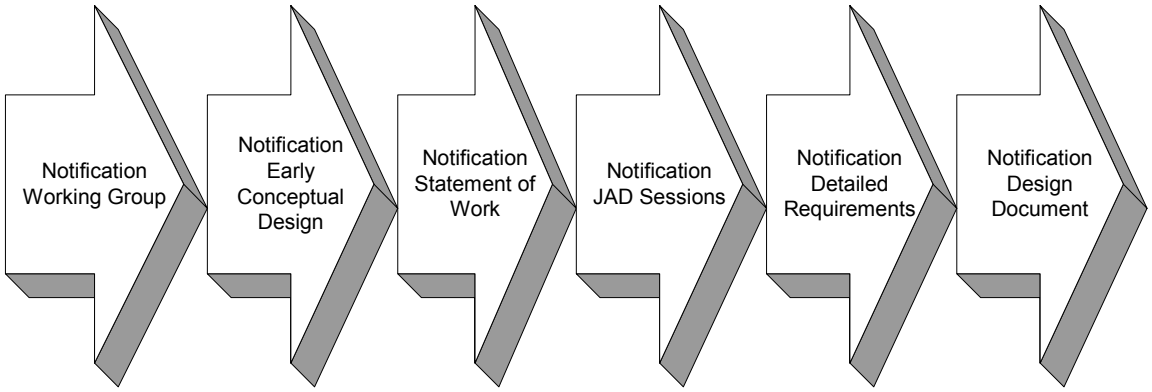


Figure 1 – Notification Services Design Process

4. Requirements

The following requirements are a compilation of in depth research and development completed in conjunction with JUSTIS management and agency representatives via the JAD sessions. For purposes of clarity, the requirements are broken down into three major components, which also form the basic elements of a notification system. The first is the events, second is the subscription methodology, and third is the method of delivery of the notification. More specific user oriented requirements were determined through discussions in the JAD sessions and have been incorporated into the user interface, which is shown in section 6.4.

4.1 Notification Events

The following events were chosen to be part of the notification subscription process, from which users or agencies will be able to choose the information that is sent to them. A more complete description of the events and their source is included in the Detailed Design, section 6.

1. Arrest
2. Judicial Disposition
3. Change in USAO Prosecutor
4. Change in DC Prosecutor
5. Change in Defense Counsel
6. Trial Date Change
7. Escapes
8. Arrest Warrants
9. Bench Warrants
10. Escape Warrants
11. Parole Violation Warrants
12. Parole Placements/Releases
13. Walk-aways

4.2 Types of Subscriptions

Through the JAD sessions, it was determined that notifications should be generated from individual offender activities. Therefore, the PDID is the best currently available unique identifier for individuals in the criminal justice system. PDID is a six-digit number given to all arrestees when fingerprinted during the "booking" process at MPD. Therefore, all subscriptions will be linked to a PDID, and the user can choose related events for each PDID. For instance, if the user would like to be notified of change in trial date, they must choose a PDID first, and then select Trial Date Change as the event, which will enable the system to send a notification to them.

Although PDID is the best currently available solution for a unique identifier, it is not perfect. A certain percentage of arrestees are never fingerprinted, and therefore do not have a PDID number. Notification Services is limited to include arrestees with PDID numbers. This issue has been researched and is documented in the Tracking Number Examination Report prepared by the Information Technology Advisory Committee's Tracking Number Working Group in August 2000.

The subscription process will benefit both individual users and agencies. Therefore, there are three options for subscribing to event notifications.

1. Individual Subscriptions – Individuals will subscribe to events through an HTML user interface on the JUSTIS website that will allow them to add new subscriptions, manage their subscription list, determine the notification delivery point, and view detailed data about their notification events.

2. Agency Subscriptions - It was determined that some agencies had such a strong demand for certain specific events for all offenders that an agency subscription process would be developed. In these cases, agencies would receive notification of all occurrences of a particular event for every PDID on record. This is known as an Agency Subscription. For instance, the DC Superior Court (DCSC) determined that it would like to receive notification of all changes in US Attorney's Office (USAO) and DC Prosecutors. Therefore, Notification Services will send notification of any change in USAO or DC prosecutor to DCSC. DCSC will then be responsible for propagating the notification to the appropriate parties.

Managed Subscriptions - A third type of subscription was developed for a few unique cases. For instance Court Services and Offender Supervision Agency (CSOSA) has Community Supervision Officers (CSO's) that supervise hundreds of supervised released individuals. These officers rely on timely public safety information in their daily business processes. In order to better manage this situation (i.e., avoid having each CSOSA employee constantly updating hundreds of subscriptions), CSOSA will employ a Managed Subscription. In this case, CSOSA will supply data indicating the PDID's and the corresponding CSO contact information and through an interface with the CSOSA operational information system and the JUSTIS Notification Services, this information will be automatically updated as the information related to the CSO and the individuals they supervise changes. Employees will only receive notifications of the

PDID's under their supervision and the list will be managed by the interface between the agency's operation system and JUSTIS Notification Services.

Individual Subscriptions, Agency Subscriptions, and Managed Subscriptions differ in fundamental ways. Figure 2 below depicts the three different subscription methodologies graphically.

Notification Services Subscription Methodology

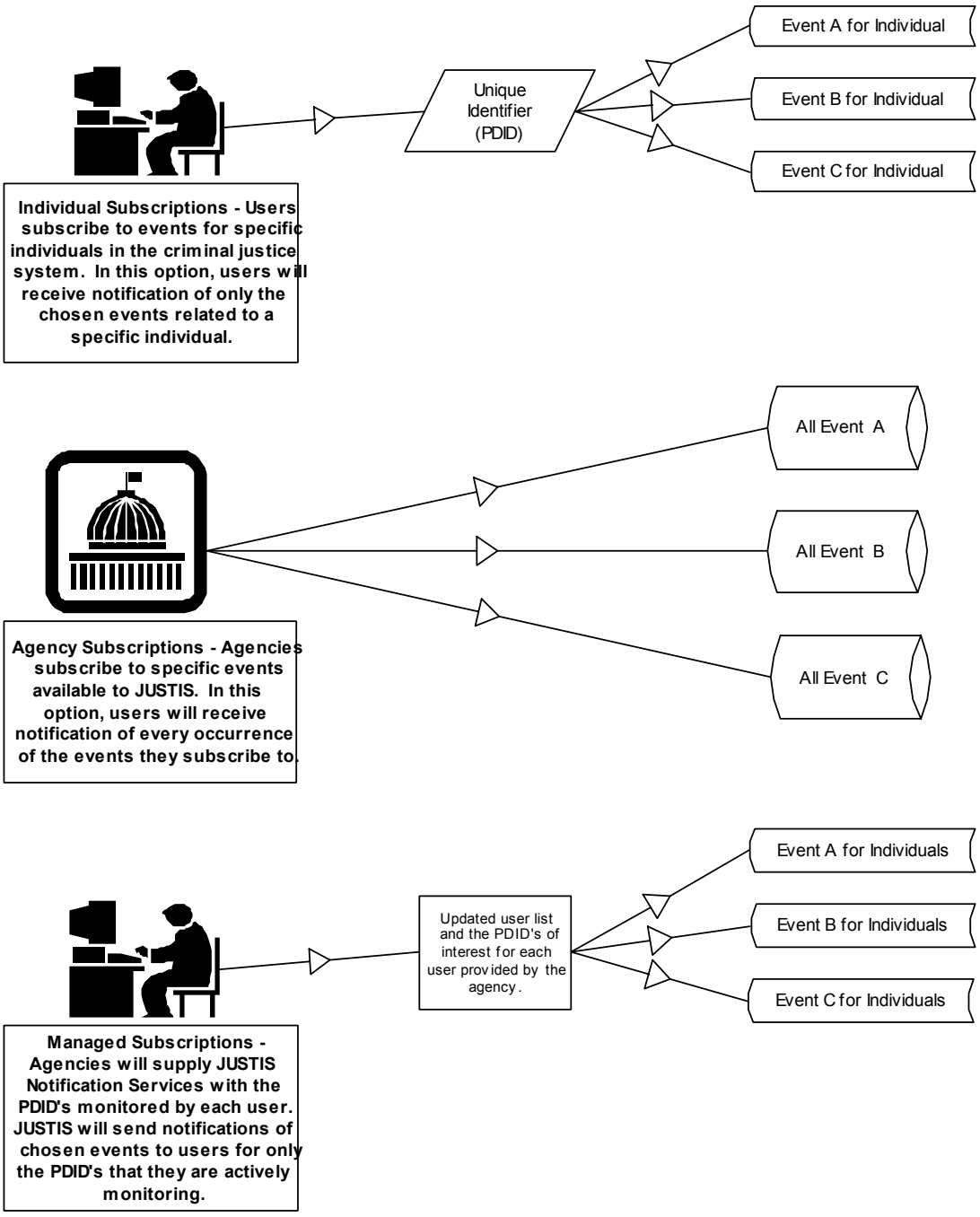


Figure 2 – Subscription Methodology

It was determined in the JAD sessions that each option is to be mutually exclusive of each other, in other words, only one option can be chosen for each subscribed event. For instance, if an individual at agency A wants to be notified of future arrests, they can subscribe using the Individual Subscription method. However, if agency A decides to subscribe to arrest events using the Agency Subscriptions or the Managed Subscriptions methods, then the individual users within that agency will not be able to subscribe to arrests through Notification Services.

4.3 Notification Delivery Methods

The final determination in the JAD sessions for delivery methods was that email, text message, and secured web notifications would be made available to the end user.

Email – Email notifications will be sent to a user-defined email address. This can include a user's District Agency email address and any other hand held device (Blackberry, cell phones, PDAs, etc) that has the ability to receive standard emails. The content of the email will include the type of event and the PDID related to the event. An link to the JUSTIS website within the email will allow the user to access the JUSTIS Notifications Homepage where users can view more detailed information about the event (see section 6.4, User Interface).

Text Message – This option was included to accommodate individual users that wish to utilize mobile communication technologies such as cell phones, internet-ready PDA's and wireless email devices. This functionality can be obtained by deploying Short Messaging Service (SMS). SMS has the ability to send messages of up to 160 characters to mobile phones, PDAs, and other wireless devices. Users will be able to receive a brief text notification of the event at their wireless device. As with email notification, the text message notifications content will be limited to information such as the event type and PDID.

Secure Web Notification – Web notification is accessed through JUSTIS on the Notifications Homepage (see section 6.4). A user will be able to log into JUSTIS at anytime to view their notifications (if any have been generated). When an end user receives an email or text message notification, they must use this same interface within JUSTIS to get detailed information regarding the event.

5. Conceptual Design

The following diagram depicts a high-level process flow of Notification Services. Each stage of the process is defined below.

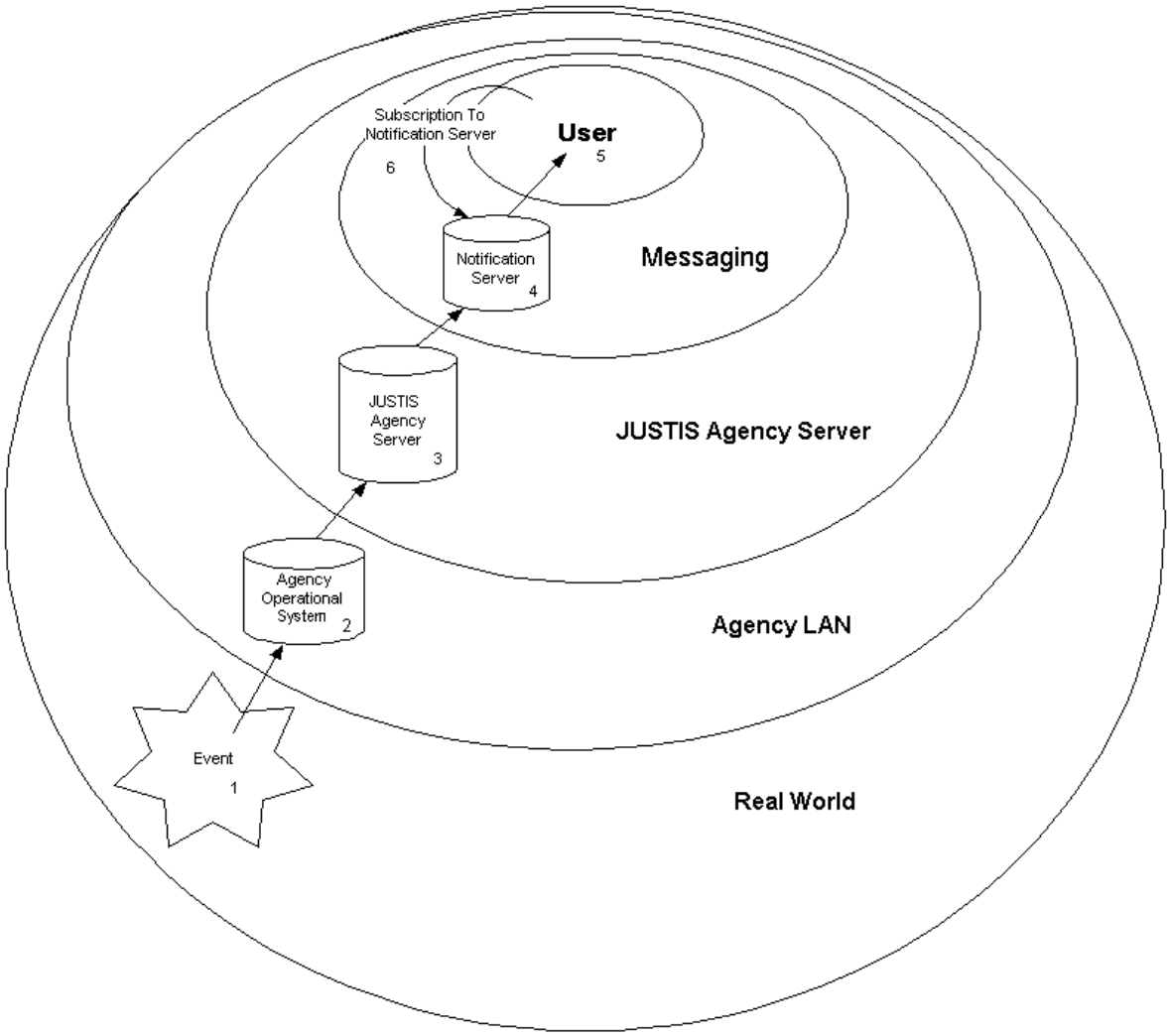


Figure 3 – Conceptual Design and Process Flow

1. In the "Real World", one of 13 events occurs, such as an escape, arrest, or trial date change.
2. Information related to the event is entered into a DC criminal justice agency operational system.
3. The JUSTIS agency server retrieves data from the agency operational system through a regularly scheduled data transformation process.

4. The JUSTIS agency server compares the transformed data to the event subscriptions located on the Notification Server to determine if it is necessary for the Notification Server to generate an event notification.

5. If it is determined that there is a need for an event notification, the Notification Server will generate and send the notification to the user via the medium selected by the user.

6. Users create their subscriptions to pre-defined events through the JUSTIS web interface, which is stored on the JUSTIS Notification Server.

6. Detailed Design Specifications

The implementation of this solution will continue to make JUSTIS a long-term mission critical solution to the public safety community of the District of Columbia. This section offers detailed descriptions of the data and processes that make the functionality of Notification Services possible. Sequence diagrams are included to offer step-by-step graphical explanations of the technical processes involved in subscriptions, sending notifications, and obtaining source data from the participating agencies for each of the events.

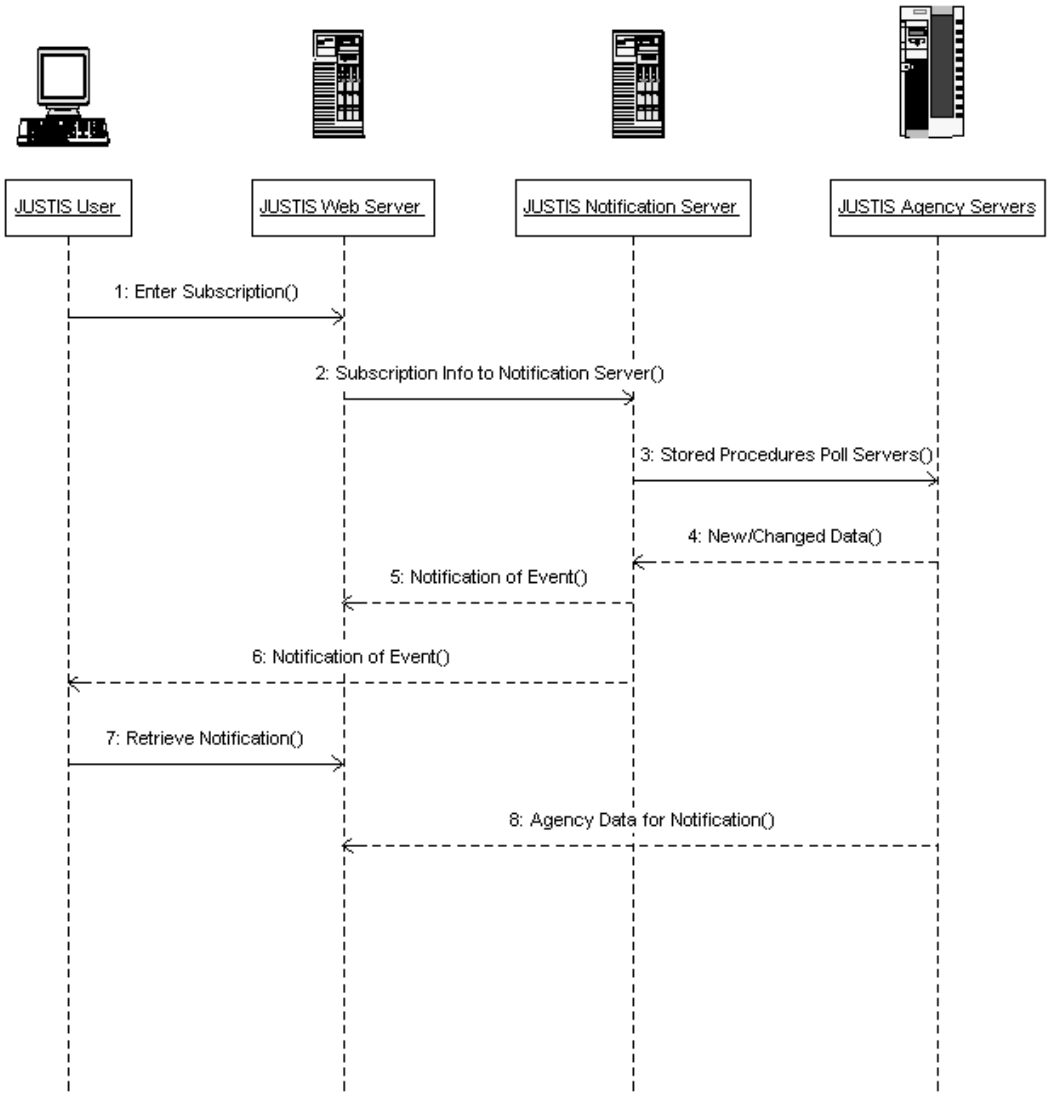
The topics in this section are arranged in the following order:

- Subscriptions
- Event Details
- Notification Process
- User Interface
- Management
- Security

6.1 Subscription and Notification Sequence Diagrams

The following sequence diagrams describe and display the subscription and notification process for the three types of subscriptions: Individual Subscriptions, Agency Subscriptions and Managed Subscriptions. These are the three ways that JUSTIS users may subscribe to receive notifications.

6.1.1 *Individual Subscription*



1. JUSTIS User – JUSTIS users will subscribe to specific events by entering the PDIDs of the individuals they wish to be notified of.
2. JUSTIS Web Server – JUSTIS users will enter subscriptions to events that they wish to be notified of on the Notification Services Home Page. PDIDs, notification methods, expiration, etc will be entered on the web interface.

3. JUSTIS Notification Server – Subscription information that is entered into the web interface will populate the subscription table on the JUSTIS Notification Server. When a user has subscribed to an event, the stored procedure for that event polls the JUSTIS agency servers for new data.

4. JUSTIS Notification Server - When new data has arrived on the JUSTIS agency servers, the event stored procedures compare the new data on the agency servers to the data the agency servers contained a day, or interval, earlier (this is done utilizing a temporary table). Data that is found to be new and changed is then compared to the subscription table using the PDIDs. If PDIDs and events match the subscription table, the event is written to the notification table on the JUSTIS Notification Server.

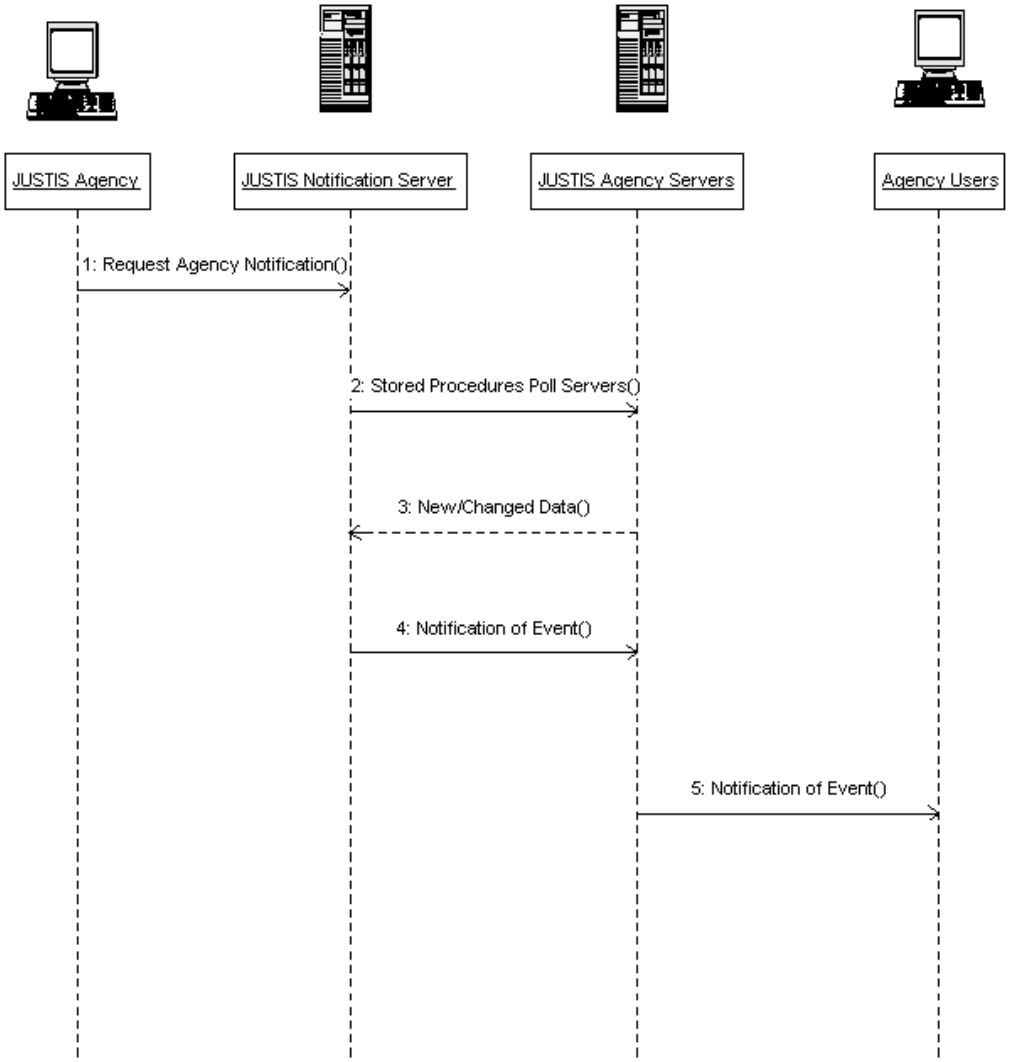
5. JUSTIS Notification Server and JUSTIS Web Server - When an event is written to the notification table, it is viewable by the user on the JUSTIS Notification Home Page as a notification.

6. JUSTIS Notification Server and JUSTIS User - When an event is written to the notification table, a notification will be sent via email and/or text message if the user specifies those specific delivery methods in the event subscription.

7. JUSTIS User – The user can retrieve the notification from the JUSTIS Notification Web Page once a notification has occurred.

8. JUSTIS Web Server - When a user retrieves a notification from the JUSTIS Notification Home Page, the event data that is displayed is contained on the JUSTIS agency servers.

6.1.2 Agency Subscription



1. JUSTIS Agency – A participating JUSTIS agency may request an agency notification. An agency notification will result in an agency receiving notifications for all occurrences of the desired event(s). If an agency subscribes to an event, the individual users in the participating agency will not be able to receive individual notifications of the event through JUSTIS.

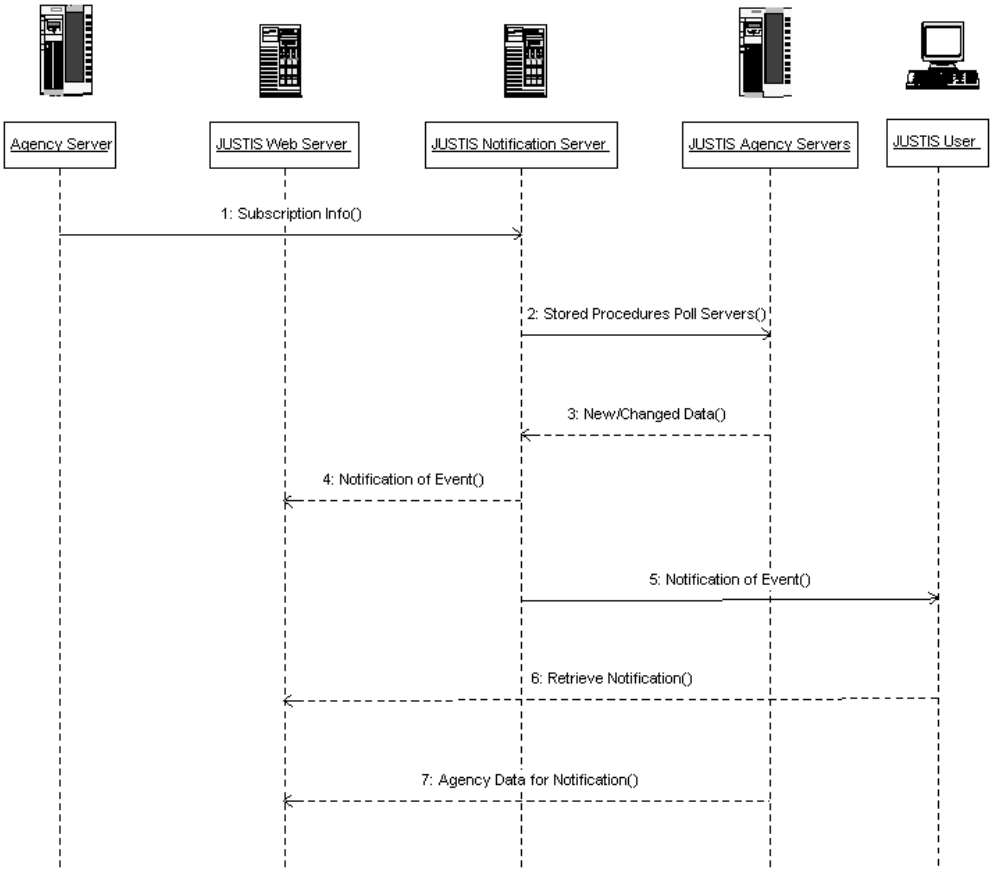
2. JUSTIS Notification Server – Agency subscription information is populated in the subscription table on the JUSTIS Notification Server. When an agency has subscribed to an event, the stored procedure for that event polls the JUSTIS agency servers for new data.

3. JUSTIS Notification Server - When new data has arrived on the JUSTIS agency servers, the event stored procedures compare the new data on the agency servers to the data the agency servers contained a day, or interval, earlier (this is done utilizing a temporary table). Data that is found to be new and changed is then compared to the subscription table using the events. If the events match the subscription table, the event is written to the notification table on the JUSTIS Notification Server.

4. JUSTIS Notification Server – When the event is written to the notification table, the subscribing agency will be notified of the events. The notification event data will be transferred to a database on the agency's JUSTIS server.

5. JUSTIS Agency Server – It is the responsibility of the subscribing agency to deliver the agency notifications to individual users in the agency (if this is desired).

6.1.3 *Managed Subscription*



1. Agency Server – Agencies participating in managed subscriptions will provide the JUSTIS Notification Server with a file that contains the User IDs, PDIDs, events, etc of for the events and users that wish to be notified. The information/file that is supplied will be loaded into the subscription table.
2. JUSTIS Notification Server – Subscription information that is loaded via the managed subscription interface will populate the subscription table on the JUSTIS Notification Server. When a user has subscribed to an event, the stored procedure for that event polls the JUSTIS agency servers for new data.
3. JUSTIS Notification Server - When new data has arrived on the JUSTIS agency servers, the event stored procedures compare the new data on the agency servers to the data the agency servers contained a day, or interval,

earlier (this is done utilizing a temporary table). Data that is found to be new and changed is then compared to the subscription table using the PDIDs. If PDIDs and events match the subscription table, the event is written to the notification table on the JUSTIS Notification Server.

4. JUSTIS Notification Server and JUSTIS Web Server - When an event is written to the notification table, it is viewable by the user on the JUSTIS Notification Home Page as a notification.
5. JUSTIS Notification Server and JUSTIS User - When an event is written to the notification table, a notification will be sent via email and/or text message if the user specifies those specific delivery methods in the event subscription.
6. JUSTIS User – The user can retrieve the notification from the JUSTIS Notification Home Page once a notification has occurred.
7. JUSTIS Web Server - When a user retrieves a notification from the JUSTIS Notification Home Page, the event data that is displayed is contained on the JUSTIS agency servers.

6.2 Event Details

Throughout the District of Columbia public safety community there are numerous events public safety officials could be notified of. In order to quantify the scope of the JUSTIS Notification Services sessions it was determined by consensus during the JAD to define a set of core events that will be included in this iteration of the JUSTIS Notification Services. This section discusses the agreed upon notification events in detail. This includes the event sources and notification timeframes, event definitions, and event constraints.

The following table lists the events and their corresponding source agencies, and systems. Also included is the estimated notification timeframe that the event will be provided to JUSTIS by the source agency. As agency processes are updated, the timeframes are subject to change.

Event	Source Agency	Source Information System	Notification Timeframe (Every)
Adult Arrest	Metropolitan Police Department (MPDC)	Washington Area Law Enforcement System (WALES)	15 mins.

Event	Source Agency	Source Information System	Notification Timeframe (Every)
Judicial Disposition	District of Columbia Superior Court (DCSC)	Criminal Information System (CIS)	24 hrs.
Change in USAO Prosecutor	United States Attorney's Office for the District of Columbia (USAO)	Replicated Criminal Information System (RCIS)	24 hrs.
Change in DC Prosecutor	Office of Corporation Counsel (OCC)	PROLAW	24 hrs.
Change in Defense Counsel	District of Columbia Superior Court (DCSC)	Court Information System (CIS)	24 hrs.
Trial Date Change	District of Columbia Superior Court (DCSC)	Court Information System (CIS)	24 hrs.
Escapes	District of Columbia Department of Corrections (DOC)	Jail and Community Corrections System (JACCS)	15 mins.
Adult Arrest Warrants	Metropolitan Police Department (MPDC)	Washington Area Law Enforcement System (WALES)	15 mins.
Adult Bench Warrants	District of Columbia Superior Court (DCSC)	Court Information System (CIS)	24 hrs.
Escape Warrants	District of Columbia Superior Court (DCSC)	Court Information System (CIS)	24 hrs.
Parole Violation Warrants	Court Services and Offender Supervision (CSOSA)	Supervision Management Automated Record Tracking (SMART)	24 hrs.

Event	Source Agency	Source Information System	Notification Timeframe (Every)
Parole Placements/Releases	United States Parole Commission (USPC)	Document Automation System (DAS)	24 hrs.
Walk-away	District of Columbia Department of Corrections (DOC)	Jail and Community Corrections System (JACCS)	TBD

Table 1 – Notification Events and Source

6.2.1 *Event Definitions*

The following are definitions of each event that will be included in Notification Services:

Adult Arrest: The adult arrest event is recognized by the JUSTIS Notification Services upon the completion of the "booking" of a fingerprinted adult. The "booking" process is defined as when the MPDC booking agent fingerprints an arrestee and the arrest information is entered into WALES. Once the arrest information and fingerprint information is into WALES, within fifteen minutes of entry into WALES, JUSTIS Notification Services will recognize the event.

Judicial Disposition: A change in judicial disposition is defined as it applies to JUSTIS Notification Services as when a case of a fingerprinted adult within the District of Columbia Superior Court is "disposed of", meaning a result to the case has been determined by order of a Superior Court judge and entered into the DCSC CIS. Note that the notification of this event is limited to only those cases contained in CIS.

Change in USAO Prosecutor: A change in USAO Prosecutor event will be recognized by JUSTIS Notification Services as when a particular case number and the associated PDID is observed to have a change in the USAO prosecutor. This event will be recognized at the time of USAO data refresh as described in the preceding table.

Change in DC Prosecutor: A change in DC Prosecutor (Office of Corporation Counsel) event will be recognized by JUSTIS Notification Services as when a particular case number and the associated PDID is observed to have a change in the DC prosecutor. This event will be recognized at the time of OCC data refresh as described in the preceding table.

Change in Defense Counsel: During the course of the Notification Specification JAD sessions it was noted that the District of Columbia Superior Court maintains the assignment of defense counsel in the agency's CIS system. Leveraging this information system, JUSTIS Notification Services will recognize the change in defense counsel via CIS. Therefore, a change in defense counsel is defined as the initial assignment of defense counsel or a change to the assignment of defense counsel of a record that has a PDID and is entered into CIS.

Trial Date Change: The trial date change will be defined, for use within JUSTIS Notification Services, as a change to a future trial date that is entered into CIS and has a defendant with a PDID.

Escapes: This event is defined as a District of Columbia Department of Corrections (DOC) Escape. This event occurs when it is recognized by the DOC JACCS System and communicated through an interface with JUSTIS Notification Services that still needs to be designed and implemented as part of the Notification Services implementation. Since JACCS is currently contributing similar data to the

nationwide Victim Notification Everyday System (VINES), JUSTIS will attempt to leverage this current process by developing an interface that captures Escapes.

Arrest Warrants: The arrest warrants event will be limited to those adult arrest warrants contained within the MPDC WALES system. These warrants will be further constrained to those individuals that have been previously fingerprinted and a corresponding PDID has been generated. JUSTIS Notification Services will recognize the event within WALES upon the refresh of the data made available to JUSTIS.

Bench Warrants: JUSTIS Notification Services will recognize bench warrants issued by the District of Columbia Superior Court. The bench warrants recognized will be limited to those issued for individuals that have been previously fingerprinted, have an assigned PDID, and that have a bench warrant entered into CIS.

Escape Warrants: The escape warrant event occurs when it is determined that an individual has escaped custody, the warrant is generated and entered into the District of Columbia Superior Court CIS system. Although escape warrants are generated by several agencies outside of the CJCC, for example the United States Marshal Service, JUSTIS Notification Services will be limited to only those escape warrants issued by the District of Columbia Department of Corrections via the District of Columbia Superior Court. The event will be further limited to those escape warrants issued for individuals that have been previously arrested, fingerprinted, a corresponding PDID has been generated and the warrant has been entered into CIS.

Parole Violation Warrants: This event occurs when there is a parole violation warrant issued by CSOSA for an individual under their supervision. The JUSTIS Notification Services will recognize this event for an adult individual that has been previously fingerprinted, a PDID has been generated and the individual has a record in SMART. Once the information about a parole violation warrant is entered into SMART via CSOSA officials, within twenty-four hours of the processing, JUSTIS Notification Services will recognize the event.

Parole Placements/Releases: This event occurs when there is a parole placement or release for an individual. JUSTIS Notification Services will interface with the USPC DAS system to recognize this event for individuals that are adult, that have been previously fingerprinted, a PDID has been generated and recorded within DAS, and there is a relational record within DAS for the individual.

Walk-away: This event occurs when there is a walk-away by an individual from a DOC “halfway” house. JUSTIS Notification Services will recognize this event when the event is recognized by the DOC VINES System and is communicated to JUSTIS Notification Services via a “to be generated” interface.

6.2.2 *Event Constraints*

The JUSTIS Notification Services event recognition will be constrained by elements of the current JUSTIS architecture.

- Currently data is recognized by JUSTIS through agency batch processes. It is assumed that these processes will continue with current agencies that make data available to JUSTIS. Therefore, Notification events within JUSTIS will only be recognized at the time the data is made available to JUSTIS. New agencies or changes in an agency's information system will provide the opportunity to migrate from the batch processes to a more real-time option.

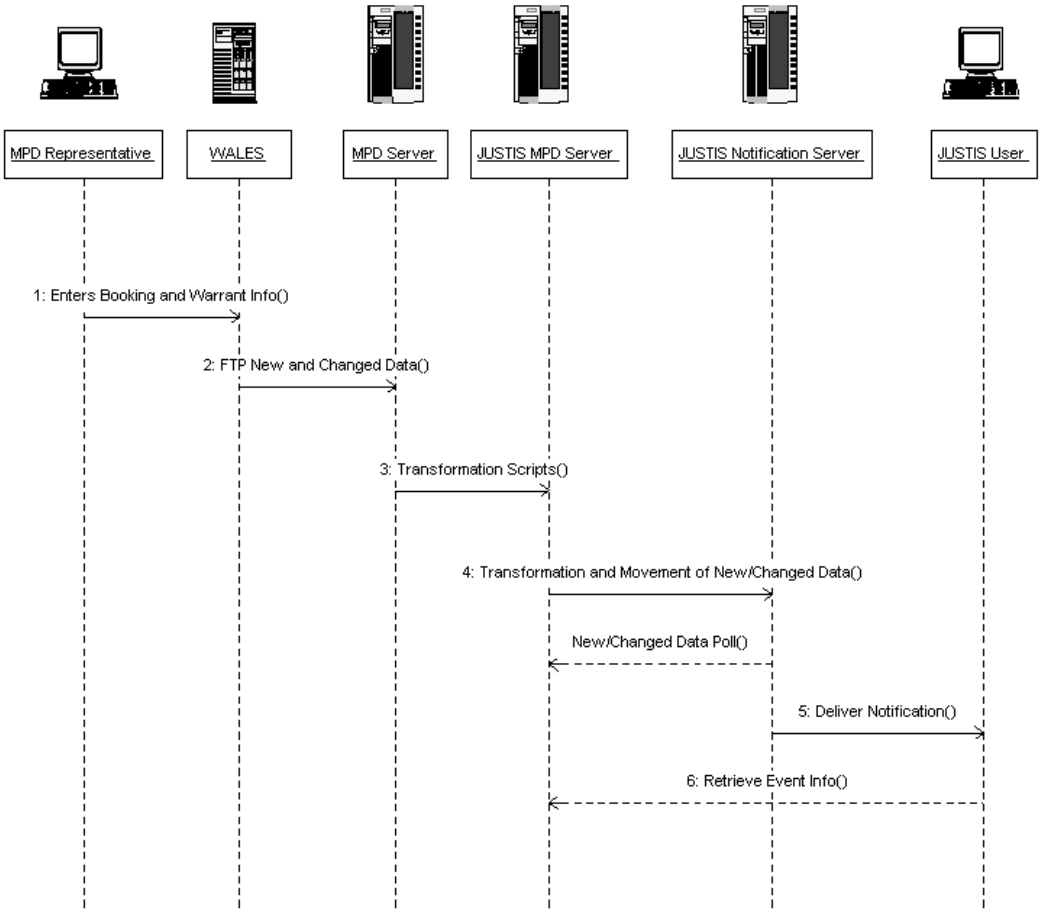
- In order for JUSTIS Notification Services to be effective, the system must rely on a unique identifier associated with an arrested individual or arrestee. The Notification JAD Session participants agreed the Metropolitan Police Department's PDID (Police Department Identifier) is the identifier of choice. This identifier, while effective for use with JUSTIS Notification Services has some well documented issues with its application within the District of Columbia. The most prevalent issue that will constrain JUSTIS Notification Services is the lack of a PDID for a certain percentage of arrestees. This issue is documented in the Tracking Number Examination Report prepared by the Information Technology Advisory Committee's Tracking Number Working Group in August 2000. Due to this issue, it is recognized that JUSTIS Notification Services will recognize events for only arrestees that have been previously arrested, fingerprinted and a PDID has been generated and stored in the agency source information system.

- The JUSTIS system is dependent upon the operation of the OCTO operated DC Wide Area Network (WAN). Any downtime or pause in operation of the DC WAN will affect the operation of JUSTIS and therefore Notification Services. Notification Services system administrators should work in coordination DC WAN administrators to assure any systems conflicts are avoided.

6.3 Notification Source Sequence Diagrams

Each sequence diagram in this section represents a single data source from which at least one Notification event is originated.

6.3.1 Adult Arrest and Adult Arrest Warrant (MPD)



1. MPD Representative – Adult arrest and adult arrest warrants are entered into WALES.
2. WALES – An extraction program is run every 15 minutes on the WALES data stores. This program extracts all new and changed arrest data records into flat

files. Once the flat file is extracted, it is transmitted via File Transfer Protocol (FTP) to the MPD Server.

3. MPD Server - New and changed data is received from WALES, via FTP, and transformed via scripts and CRON jobs into Oracle. In the future, Extensible Markup Language (XML) formats should be generated and used in data communications between the Agency and JUSTIS Agency servers. This would provide the district with a standard and flexible way to describe and share data. XML should be considered for all agency data contribution processes. An example of a potential XML Document Type Definition (DTD) for arrest data is described below.

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.4 U (http://www.xmlspy.com) by Tony Curington
Jr. (KPMG Consulting, Inc.) -->
<!ELEMENT arrestList_DistrictofColumbia (arrest_DistrictofColumbia*,
arrestcharges_DistrictofColumbia*, lockup_DistrictofColumbia*,
defendant_DistrictofColumbia?, victim_DistrictofColumbia*)>
<!ELEMENT arrest_DistrictofColumbia (personalIDNumber*,
policeDistrict_DistrictofColumbia*,
policeServicearea_DistrictofColumbia*, arrestNumber_DistrictofColumbia*,
arrestDate_DistrictofColumbia*, bookingDate?, bookingTime?,
bookingLocation?)>
<!ELEMENT lockup_DistrictofColumbia (lockupNumber_DistrictofColumbia?,
bookingDate?, bookingTime?, bookingLocation?)>
<!ELEMENT defendant_DistrictofColumbia (person*, personDescription?,
policeServicearea_DistrictofColumbia?, personalIDNumber+)>
<!ELEMENT victim_DistrictofColumbia (person?, personDescription?)>
<!ELEMENT arrestCharges_DistrictofColumbia (offenseCode, chargeName,
chargeDisposition, complaintControlNumber_DistrictofColumbia)>
<!ELEMENT arrestcharges_DistrictofColumbia (#PCDATA)>
<!ELEMENT personalIDNumber (#PCDATA)>
<!ELEMENT policeDistrict_DistrictofColumbia (#PCDATA)>
<!ELEMENT policeServicearea_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestNumber_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestDate_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestTime_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestAddress_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestOfficerName_DistrictofColumbia (#PCDATA)>
<!ELEMENT arrestOfficerBadgeNumber_DistrictofColumba (#PCDATA)>
<!ELEMENT lockupNumber_DistrictofColumbia (#PCDATA)>
<!ELEMENT bookingDate (#PCDATA)>
<!ELEMENT bookingTime (#PCDATA)>
<!ELEMENT bookingLocation (#PCDATA)>
<!ELEMENT offenseCode (#PCDATA)>
<!ELEMENT chargeName (#PCDATA)>
<!ELEMENT chargeDisposition (#PCDATA)>
<!ELEMENT complaintControlNumber_DistrictofColumbia (#PCDATA)>
<!ELEMENT warrantType_DistrictofColumbia (#PCDATA)>
<!ELEMENT warrantNumber_DistrictofColumbia (#PCDATA)>
<!ELEMENT dispositionCode_DistrictofColumbia (#PCDATA)>
<!ELEMENT lockupDate_DistrictofColumbia (#PCDATA)>
```

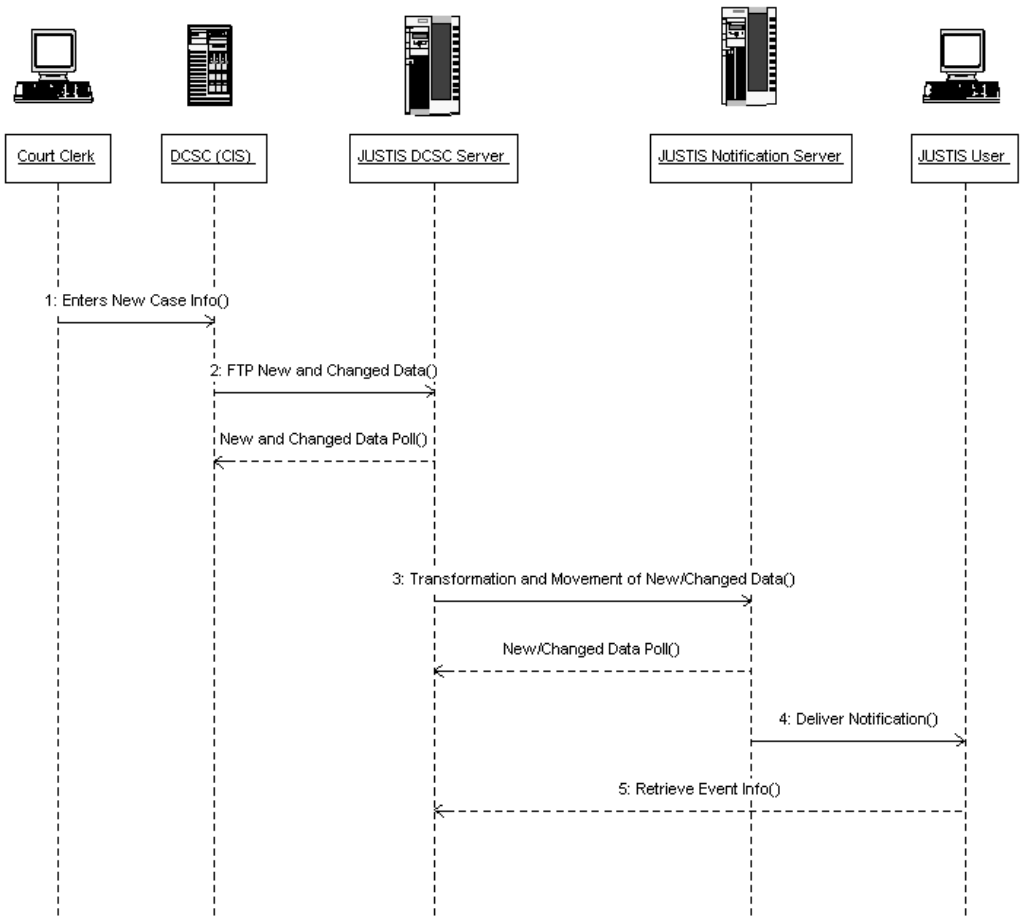
```
<!ELEMENT releaseType_DistrictofColumbia (#PCDATA)>
<!ELEMENT lockupType_DistrictofColumbia (#PCDATA)>
<!ELEMENT docketNumber_DistrictofColumbia (#PCDATA)>
<!ELEMENT person (personName?, residence?, personDescription?)>
<!ELEMENT personName (firstName?, middleName?, lastName?, nameSuffix?,
fullName*, alias_DistrictofColumbia*)>
<!ELEMENT firstName (#PCDATA)>
<!ELEMENT lastName (#PCDATA)>
<!ELEMENT middleName (#PCDATA)>
<!ELEMENT nameSuffix (#PCDATA)>
<!ELEMENT residence (physicalLocation+, telephone?)>
<!ELEMENT physicalLocation (postalAddress*, location*)>
<!ELEMENT addressLine (#PCDATA)>
<!ELEMENT postalAddress (addressLine*, city*, state*, postalCode*)>
<!ELEMENT city (#PCDATA)>
<!ELEMENT postalCode (#PCDATA)>
<!ELEMENT location (#PCDATA)>
<!ELEMENT fullName (#PCDATA)>
<!ELEMENT telephone (#PCDATA)>
<!ELEMENT alias_DistrictofColumbia (#PCDATA)>
<!ELEMENT sex (#PCDATA)>
<!ELEMENT personDescription (sex*, birthdate*, race*,
age_DistrictofColumbia)>
<!ELEMENT birthdate (#PCDATA)>
<!ELEMENT race (#PCDATA)>
<!ELEMENT age_DistrictofColumbia (#PCDATA)>
<!ELEMENT state (#PCDATA)>
```

4. JUSTIS MPD Server – Scripts retrieve and load the new and changed data from the MPD Oracle Database into the JUSTIS MPD Oracle database. The new data is then transformed into a Microsoft SQL Server database.

5. JUSTIS Notification Server – The arrest event stored procedure polls the Microsoft SQL Server database on the JUSTIS MPD Server for new data. When new data is found, the stored procedure executes and compares PDIDs in the data to PDIDs contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via web and email or text message if specified.

6. JUSTIS User – The user receives the notification from the Notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS MPD Server and shown in HTML format to the user.

6.3.2 Judicial Disposition, Change in Defense Counsel, Trial Date Change, Bench Warrant, and Escape Warrant (DCSC)



1. Court Clerk – A court clerk enters any new case information (judicial disposition, change in defense counsel, trial date change, bench warrant, escape warrant, etc) into DCSC's system (CIS).

2. DCSC (CIS) – An extraction program is run nightly. This program extracts any changed records from the Criminal Information System (CIS) into a flat file. Once the flat file is extracted, it is loaded to an FTP Server

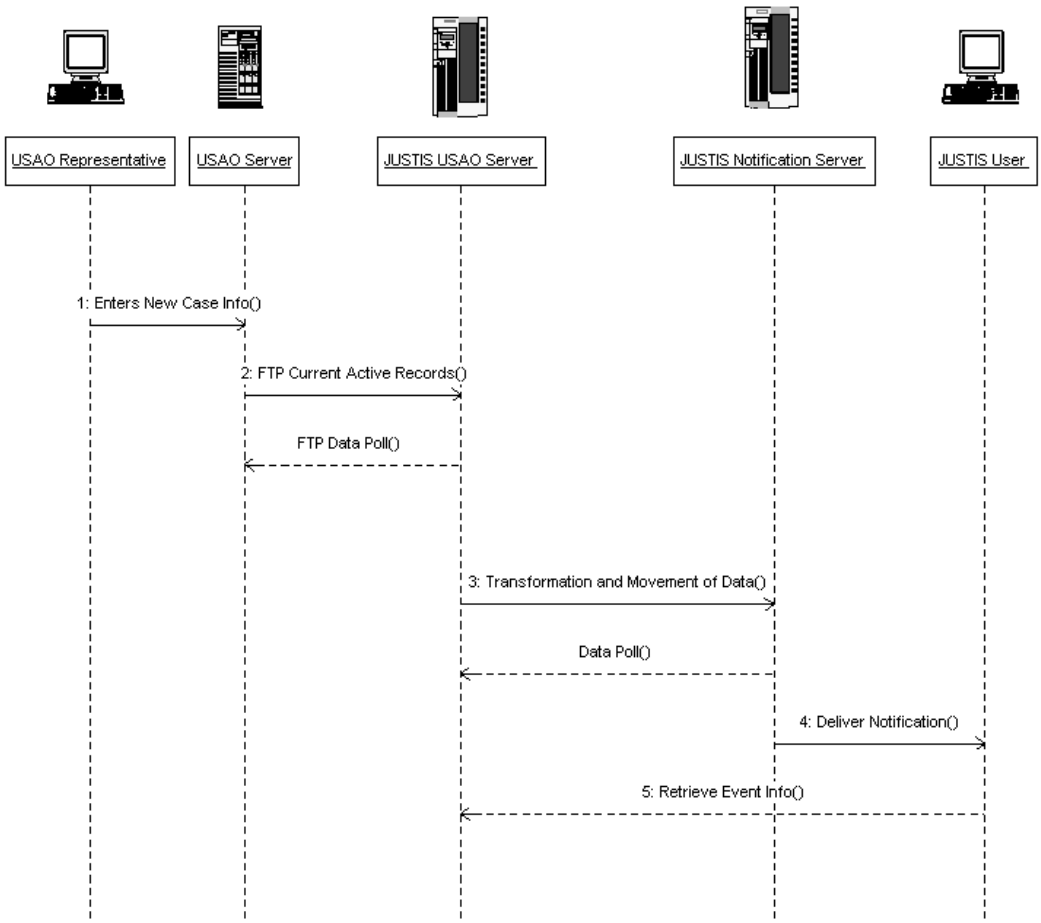
3. JUSTIS DCSC Server – A scheduler program polls the DCSC FTP server for the presence of new flat files. After a new file is received, the records are

processed and transformed into the JUSTIS Microsoft SQL Server Database for DCSC. A “date of last update” (DLU) flag is updated to reflect the date and time that the DCSC data was refreshed.

4. JUSTIS Notification Server – A scheduler program polls the JUSTIS DCSC server for the presence of new data. When new data is found, the event stored procedures (judicial disposition, change in defense counsel, trial date change, bench warrant, and escape warrant) execute. These procedures first compare the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS DCSC Server and shown in HTML format to the user.

6.3.3 *Change in USAO Prosecutor (USAO)*

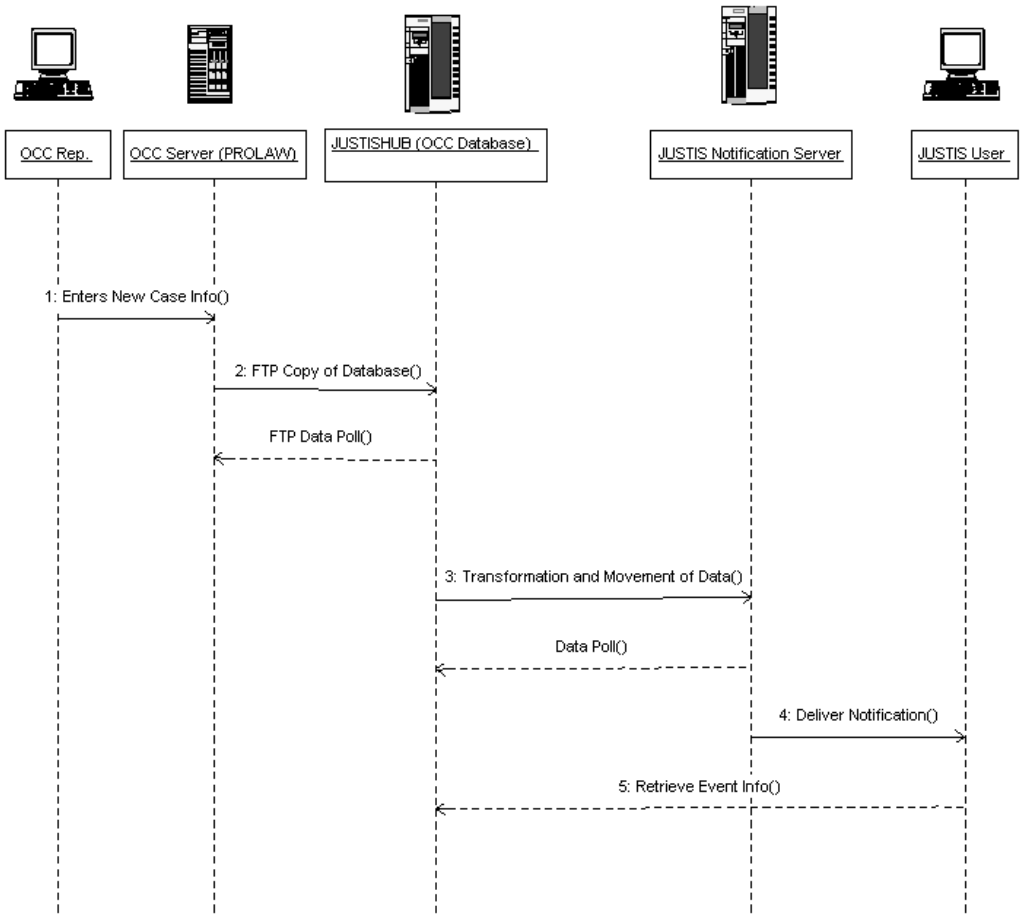


1. USAO Representative – A USAO representative enters the change in USAO prosecutor into USAO's system.
2. USAO Server – An extraction program is run nightly. This program extracts all current active records from the USAO Oracle database into a flat file. Once the flat file is extracted, it is transmitted to the JUSTIS USAO Server.
3. JUSTIS USAO Server – A scheduler program polls the USAO Server for the presence of new flat files. After a new file is received, the records are processed and transformed into the JUSTIS Microsoft SQL Server Database for USAO. A "date of last update" (DLU) flag is updated to reflect the date and time that the USAO data was refreshed.

4. JUSTIS Notification Server – A scheduler program polls the JUSTIS DCSC server for the presence of new data. When new data is found, the change in USAO prosecutor event stored procedure executes. This procedure first compares the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS USAO Server and shown in HTML format to the user.

6.3.4 *Change in DC Prosecutor (OCC)*

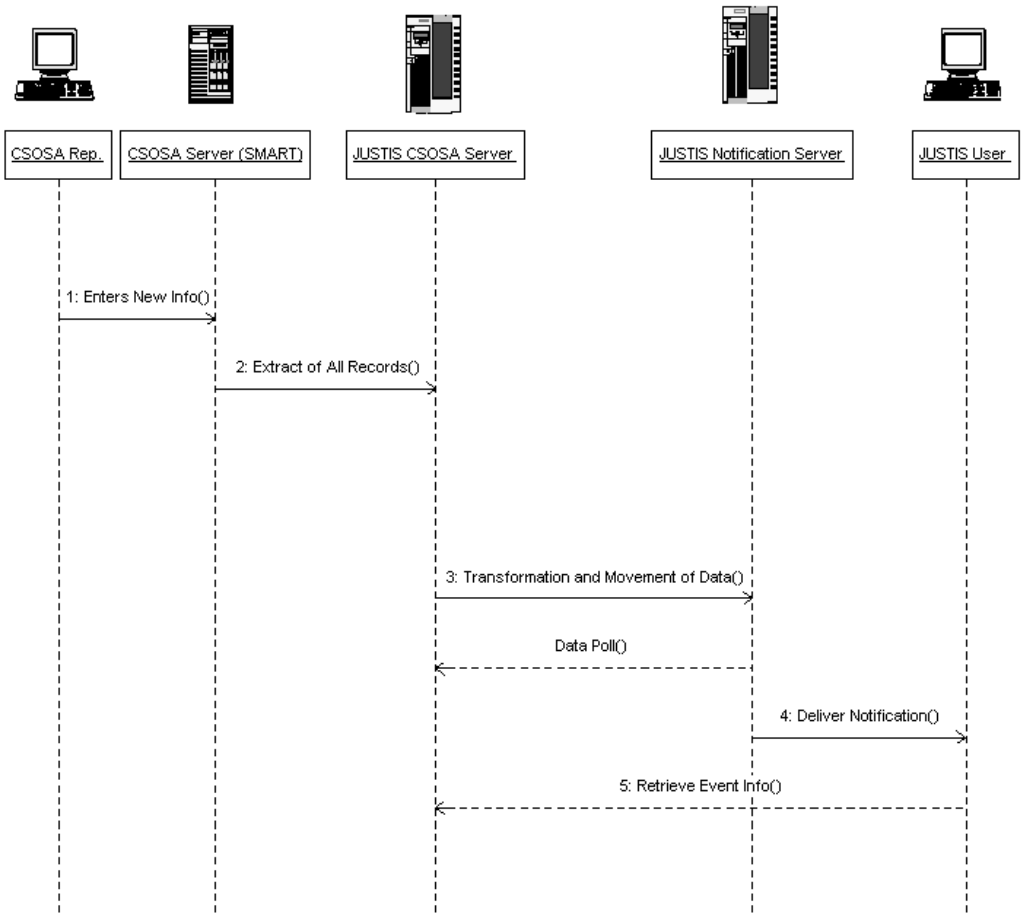


1. OCC Representative – An OCC representative enters the change in DC prosecutor into OCC's system (PROLAW).
2. OCC Server – Transformations load data from OCC relational Criminal database to the JUSTISHUB Server nightly.
3. JUSTISHUB – Data from OCC's Criminal database is received and loaded into the OCC Microsoft SQL Server Database at a regularly scheduled interval (nightly). This JUSTIS OCC Microsoft SQL Server Database is contained on the JUSTISHUB.

4. JUSTIS Notification Server – A scheduler program polls the OCC Microsoft SQL Server Database on the JUSTISHUB Server for the presence of new data. When new data is found, the change in DC prosecutor event stored procedure executes. This procedure first compares the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS OCC Microsoft SQL Server Database and shown in HTML format to the user.

6.3.5 *Parole Violation Warrants (CSOSA)*



1. CSOSA Representative – A CSOSA representative enters parole violation warrants into CSOSA's system (SMART).

2. CSOSA Server – An extraction program is currently run weekly. This program extracts all records in SMART, condenses all the tables into one, and places it in a flat file format. In order for JUSTIS Notification Services to recognize the appropriate events, additional data elements from SMART will have to be added to this flat file. Once the flat file is extracted the transfer programs places the flat file in a specified folder on the JUSTIS CSOSA server.

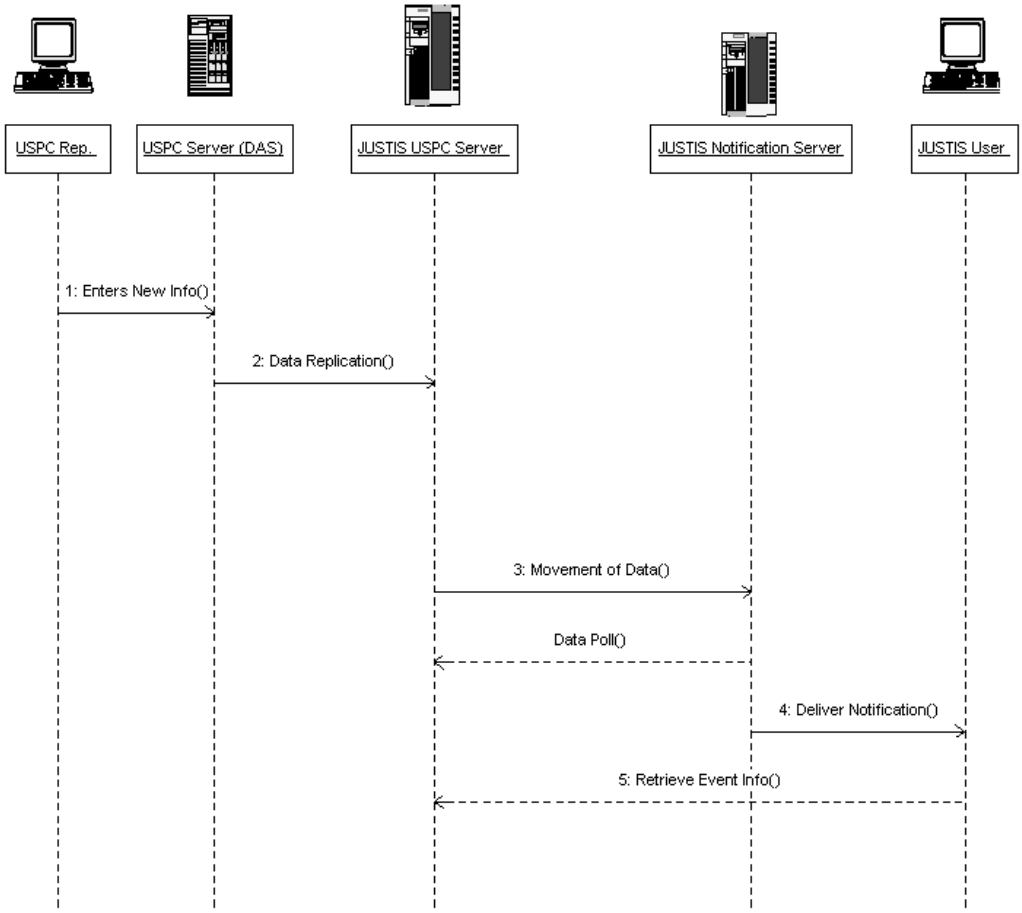
3. JUSTIS CSOSA Server – a scheduler program on the JUSTIS CSOSA Server creates a back up of the current Microsoft SQL Server Database and removes

the records from the database. The scheduler program processes the flat file placed on the JUSTIS CSOSA Server in step 2 and loads the records into the Microsoft SQL Server Database via a load program. A “date of last update” (DLU) flag is taken from the date of creation attached to the extracted flat file.

4. JUSTIS Notification Server – A scheduler program polls the CSOSA Microsoft SQL Server Database on the JUSTIS CSOSA Server for the presence of new data. When new data is found, the parole violation warrant event stored procedure executes. This procedure first compares the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS CSOSA Microsoft SQL Server Database and shown in HTML format to the user.

6.3.6 Parole Placements/Releases (USPC)



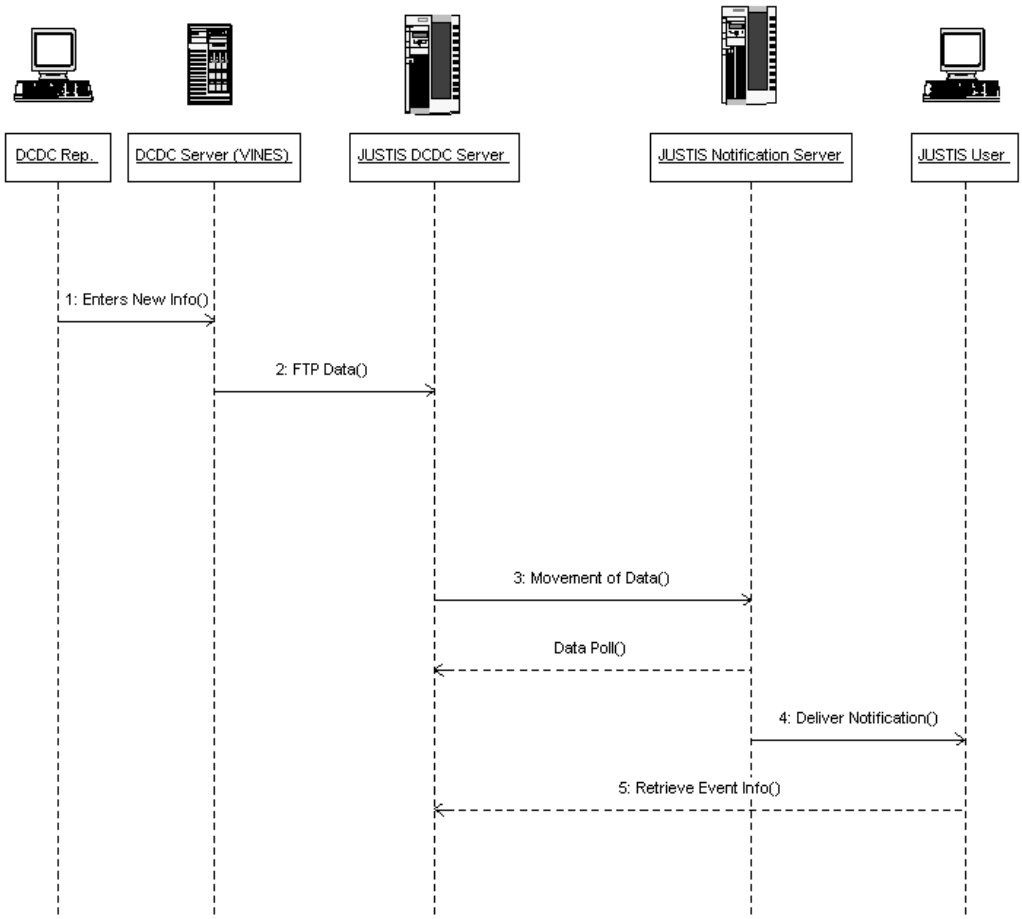
1. USPC Representative – A USPC representative enters parole placements/releases into USPC's system (DAS).
2. USPC Server–Snapshot replication is used to copy data and or database objects exactly as they exist at that moment. Once the replication of the USPC database is completed, the subsequent transactions are sent to the replicated database on the JUSTIS USPC Server.

3. JUSTIS USPC Server – Subscription processes in the Microsoft SQL Server Database pull data from distribution agent at the USPC Server and populate the replicated database at JUSTIS USPC Server.

4. JUSTIS Notification Server – A scheduler program polls the JUSTIS USPC Server for the presence of new data. When new data is found, the parole placement/releases event stored procedure executes. This procedure first compares the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS USPC Microsoft SQL Server Database and shown in HTML format to the user.

6.3.7 *Escape and Walk-away (DOC)*



Please note that data contribution does not exist from DOC's VINES system, and therefore must be designed and implemented as part of the Notification Services implementation. As a result, the below steps are an example of possible contribution processes.

1. DOC Representative – A DOC representative enters escapes and/or walk-aways into DOC's system (VINES).

2. DOC's Server – An extraction program would run at set intervals (nightly). This program would extract all new records in VINES and places it in a flat file or XML format. Once the data are extracted the transfer programs places the files on the JUSTIS DOC Server.

3. JUSTIS DOC Server – The scheduler program processes the files placed on the JUSTIS CSOSA Server in step 2 and loads the records into the Microsoft SQL Server Database via a load program.

4. JUSTIS Notification Server – A scheduler program polls the DOC Microsoft SQL Server Database on the JUSTIS DOC Server for the presence of new data. When new data is found, the escape and walk-away events stored procedures executes. These procedures first compare the new data with data from the prior day in a temporary table in order to find records that have been added and/or changed. Data that is new and changed is compared using the PDIDs to data contained in the notification subscription table. If a match is found, the data is written to the notification generation table. Once this occurs, the event notification is sent to the user via the web. The user may also receive an email or text message if specified in the subscription.

5. JUSTIS User – The user receives the notification from the notification server and logs into JUSTIS. The JUSTIS Notification Page will provide a link to detailed data about each event notification. The detailed data is retrieved from the JUSTIS DOC Microsoft SQL Server database and shown in HTML format to the user.

6.4 User Interface

The user interface shown below is for individual subscriptions. Agency Subscriptions and Managed Subscriptions will employ different interface techniques to accommodate their particular functionalities.

The user interface is an extension of the current JUSTIS website. JUSTIS is a secured website using 128-bit SSL security as well as a secure password policy to prevent non-certified users from accessing JUSTIS. Users must log into JUSTIS to receive the detailed information regarding their notification. On the JUSTIS homepage, there will be a link under the Tools section for Notification Services.

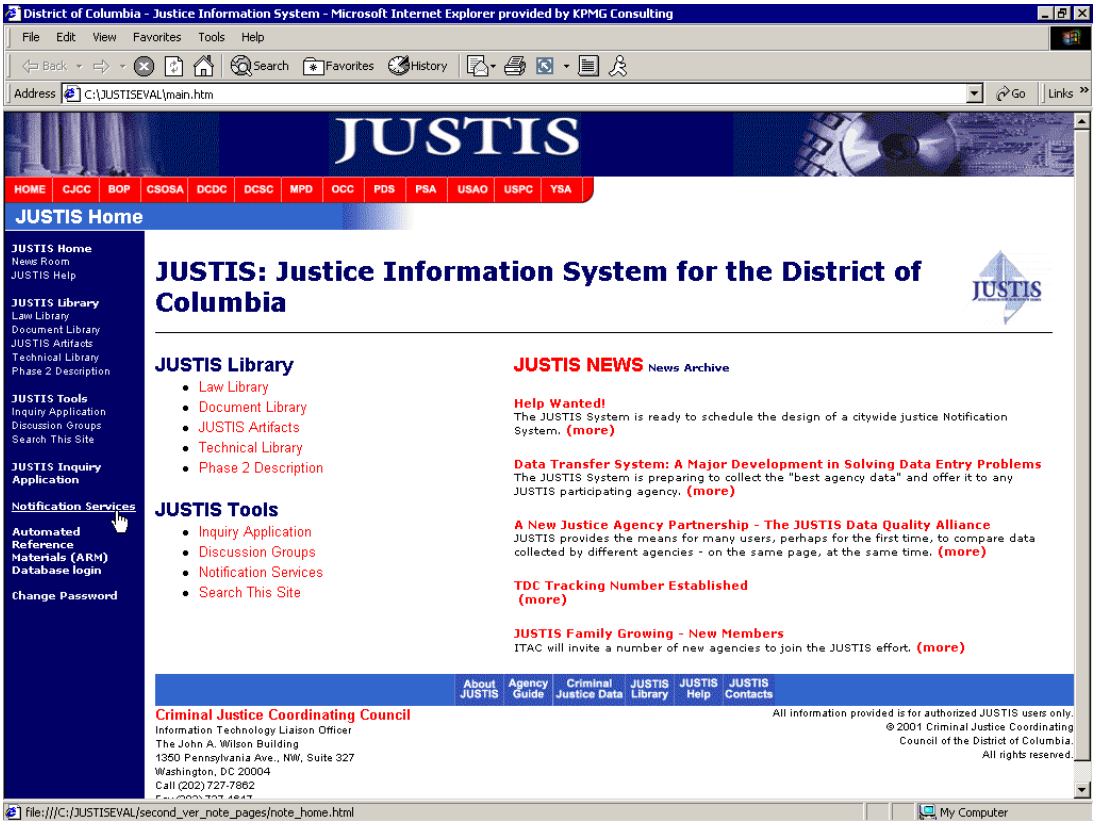


Figure 4 – JUSTIS Home

The Notification Services link will take the user to the Notification Home Page on the following page.

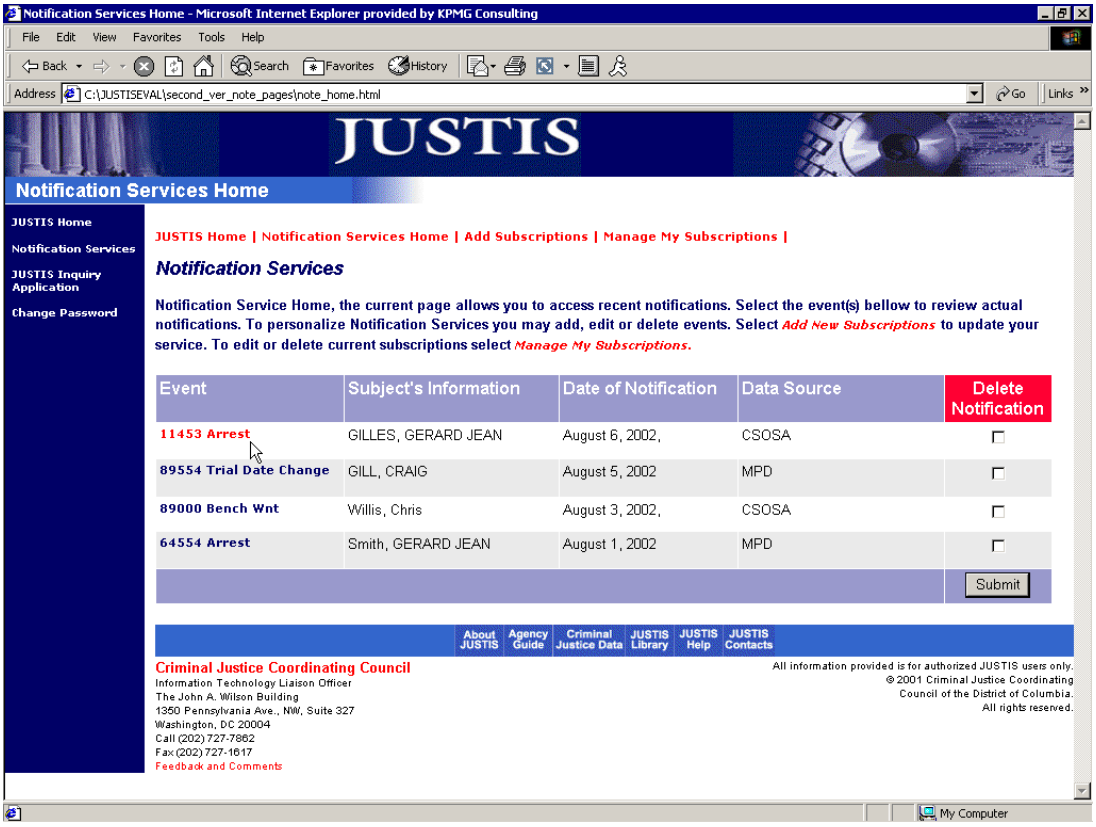


Figure 5 – Notification Homepage

The Notification Services Homepage is where users will receive the actual notification. Although an email or text message may alert the user of the notification, the information contained in the initial notification will be limited to the event and PDID. Users will have to log into JUSTIS to get detailed information.

Notifications that have not been viewed will be shown in red. This means that if the user has not viewed the detailed information about the notification, the notification will be shown in red. Users can click on the notification in the Event column to open the detailed information. In the case of an arrest, shown above, the user will receive arrest information. Users also have the option of deleting the notification by checking the Delete box, and clicking the Submit button. Otherwise, the notification will remain in the user's homepage. An example of detailed information that will be available to users (arrest data) is shown in Figure 6.

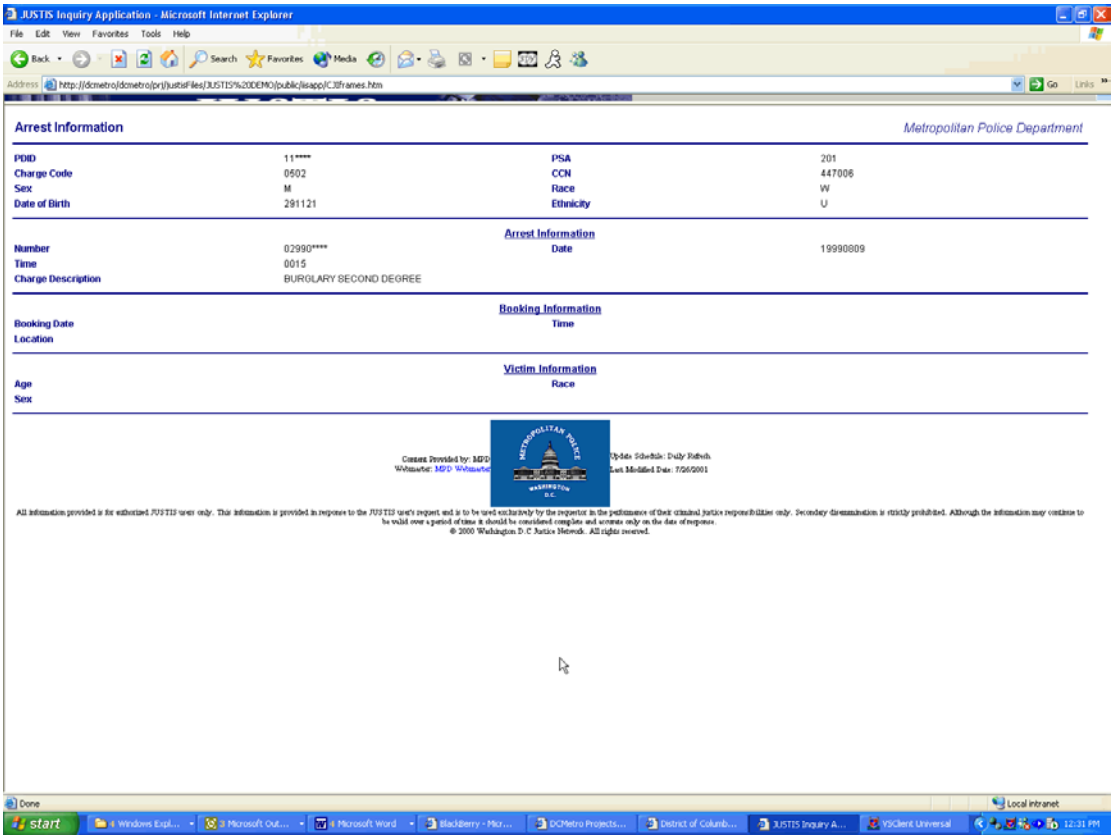


Figure 6 - Detailed Arrest Data

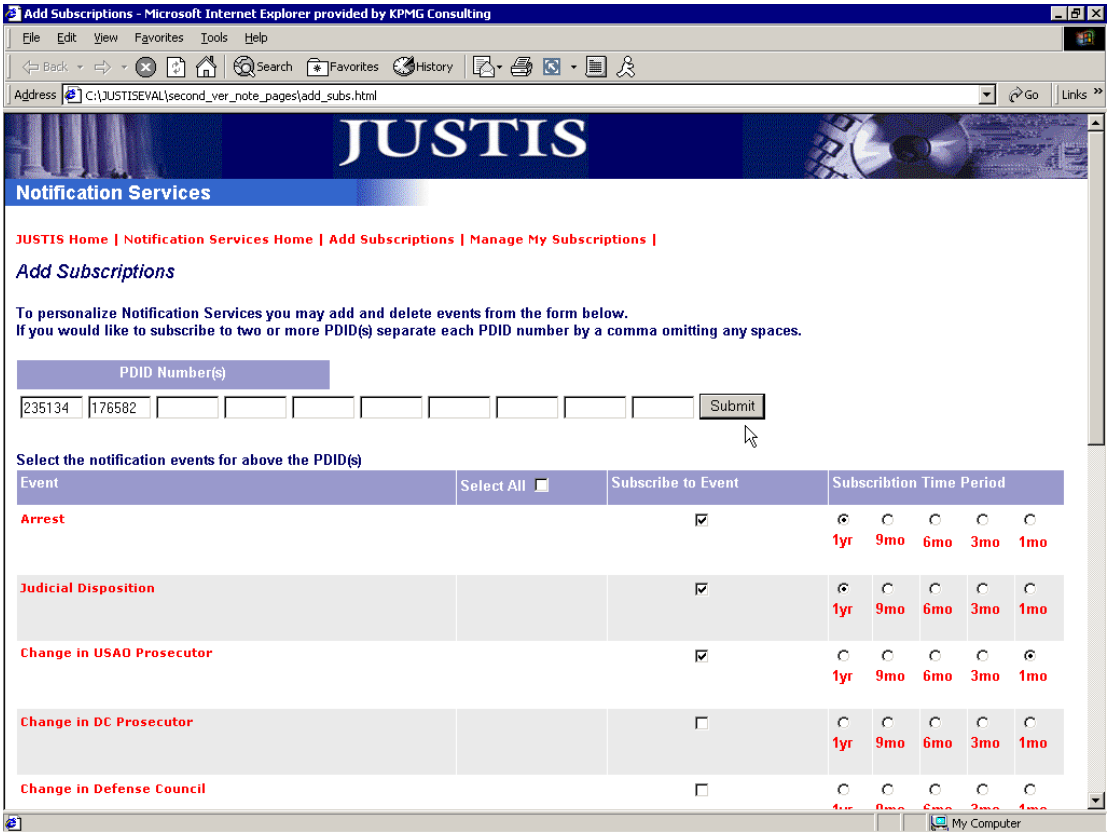


Figure 7 – Add Subscriptions page (top)

From the Notification Services Home Page, users can navigate using the red links at the top of the page. These links are shown on all Notification Services pages. Clicking on the Add Subscriptions link will take the user to the Add Subscriptions page shown above in Figure 7.

From this page, the user can type in PDID's in the white text boxes, and then choose the events that they would like to be notified of for each set of PDID's typed in (up to ten at a time). The events are listed in the first column below the PDID entry boxes. If the user wants to subscribe to all events for a set of PDID's, then, they simply check Select All. The default time duration for a subscription will be one year, but the user has the option of choosing a shorter duration. Once the time period has finished, the user will receive an email notification stating that the subscription will be terminated, unless it is renewed.

Users will also be able to control where the notification is sent to by managing their JUSTIS email or by adding a second notification email. At the bottom of the Add Subscriptions page, users can see what email they have in the JUSTIS User Database and correct it, or update it if necessary. Or, if the user would like to receive the notification at a separate email (a text message device for instance), they can submit a specific email for that function. Figure 8 shows this functionality.

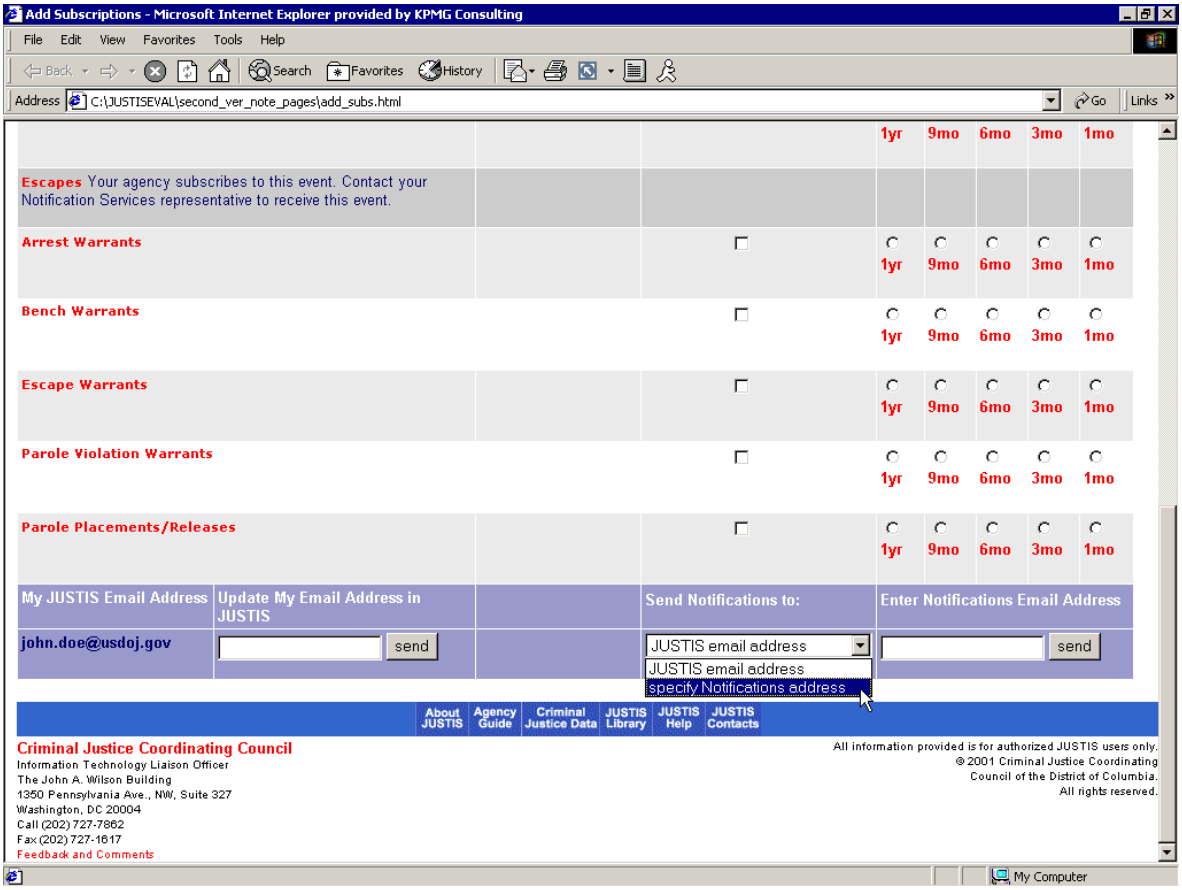


Figure 8 – Add Subscriptions page (bottom)

Note that the user is a USAO employee (USAO uses US Department of Justice email). In this case, the user's agency has decided to subscribe as an Agency to Escapes. Notice also that Escapes, at the top of Figure 8 is not functional for this user. If the user's agency has an Agency Subscription to a particular event, then individual users at that agency will not be able to employ Individual Subscriptions. Again, it is the agency's responsibility to disseminate notifications internally if they are subscribed as an agency to an event.

Finally, the user is able to manage their subscriptions by clicking on the Manage My Subscriptions link at the top of the page.

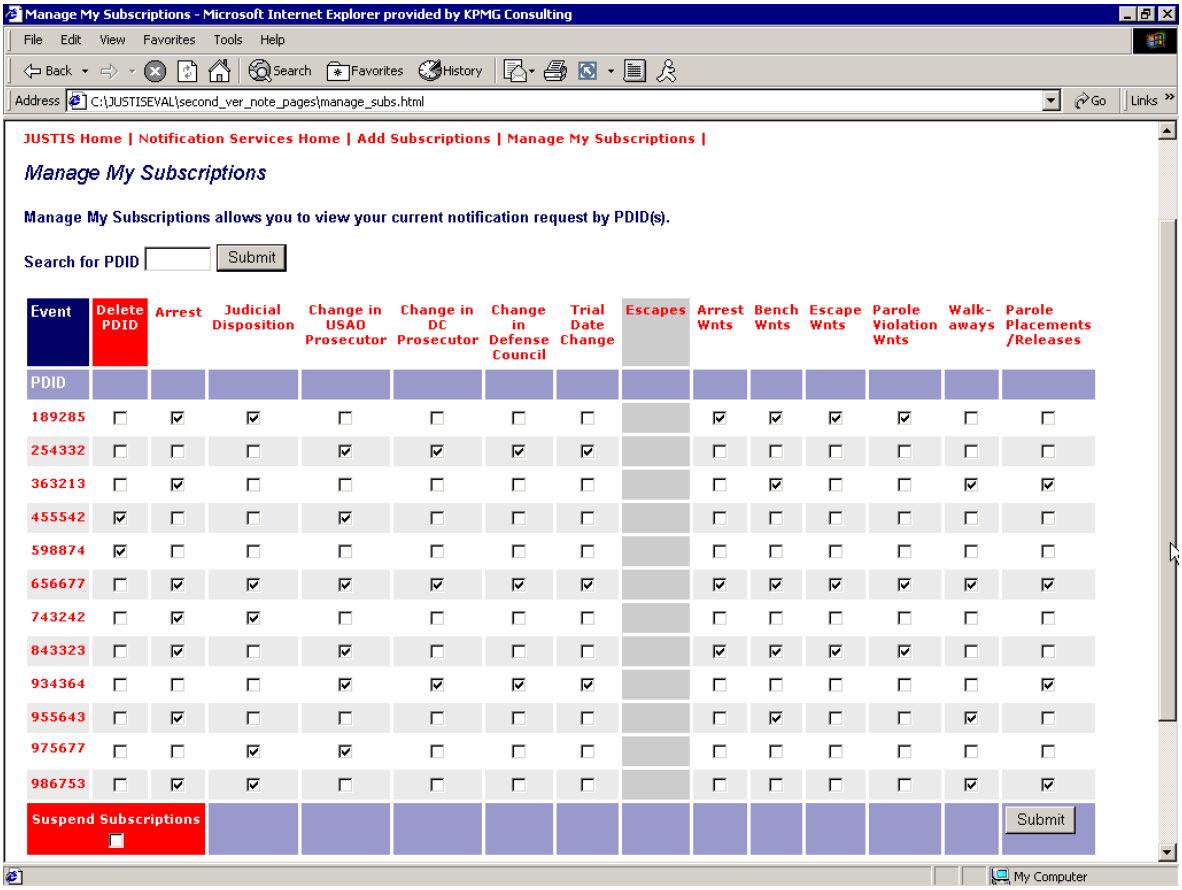


Figure 9 – Manage My Subscriptions page

First, notice that Escapes are grayed out, just as in the Add Subscriptions page. The user is ineligible to subscribe to Escapes since the agency is already subscribed to that event.

On this page, the user is presented with all currently active subscriptions. Here, the user can add events to PDID's, delete PDID's and suspend all subscriptions simply by checking and un-checking boxes on the page. Suspending subscriptions was a specific request in case users were on extended leave and did not want to be notified while away. In addition users will not have to re-enter their subscriptions upon their return. The matrix format allows users to view and control their Notification Services easily and quickly. Also, for users with many PDID's, there is a PDID search that will enable the user to quickly find a specific PDID.

6.5 Notification Management

6.5.1 Notification Archive

In order to track the operation of Notification Services, all notifications will be archived in a log file as the event notifications are created. All transactions will be stored in a single table on the Notification Server.

6.5.2 Security

As mentioned earlier, Notification Services is built on the current JUSTIS infrastructure. Therefore, Notification Services will continue to enforce the same security principles with regards to data access, that are already in place for JUSTIS. Data access restrictions will be determined based upon the JUSTIS Agency Data Access Chart maintained by the CJCC Information Technology Security Officer (ITSO). Notification Services will continue to maintain the security standards established during the development of the JUSTIS Inquiry Application, while providing users with increased functionality.

Only authorized users are allowed to enter JUSTIS. Upon completion of a user access request form and approval from the Information Technology Security Officer (ITSO), the user will receive a secure temporary password and username to access JUSTIS. It is the user's responsibility to assure that information obtained through JUSTIS is not misused in any way. Also, user access to information will follow the same guidelines that have been created for current JUSTIS applications.

A comprehensive description of the security policies in place is provided in the JUSTIS Security Policies and Procedures .

7. Physical Design Specifications

7.1 Notification Services System Architecture

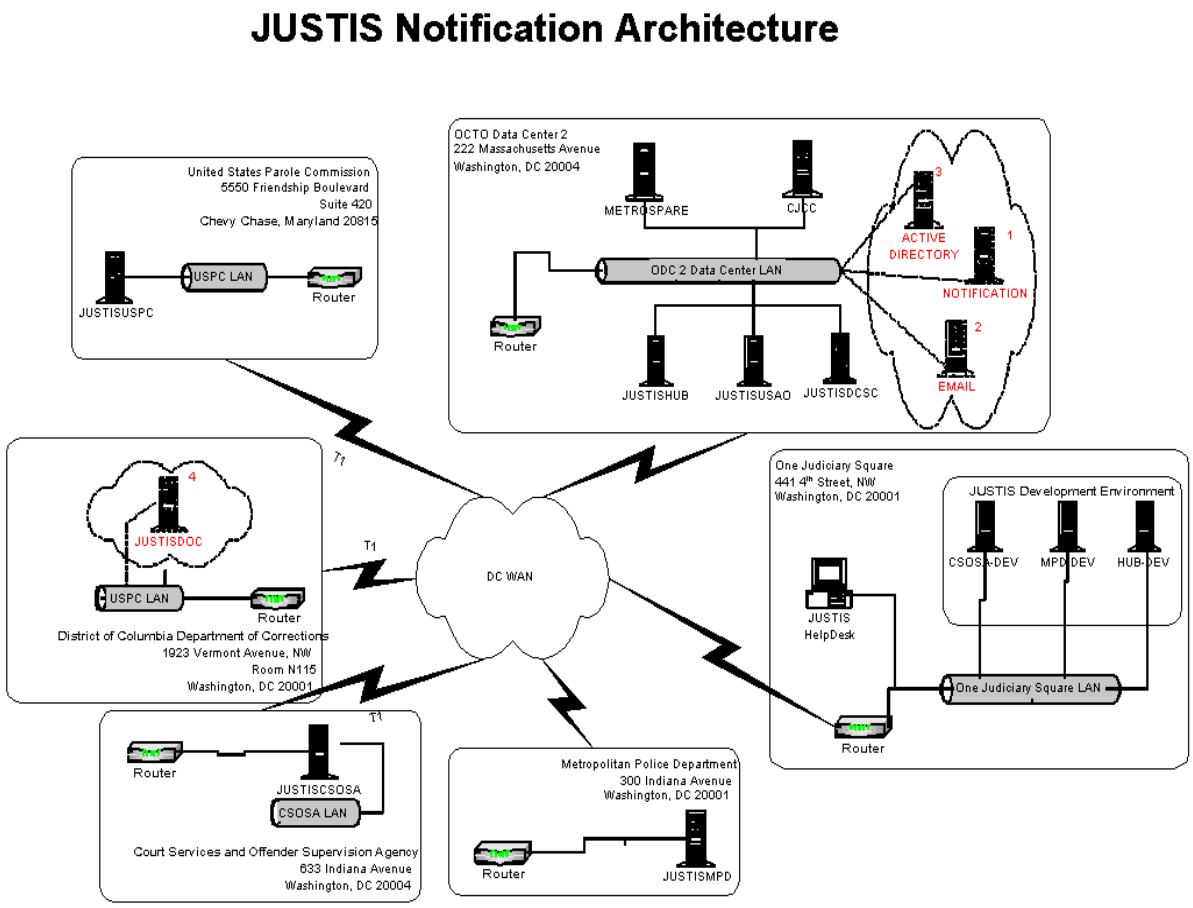


Figure 10 – JUSTIS Architecture Diagram with Notification Services

1. Notification Server – The Notification Server will contain the notification application and logic. Specifically, the event stored procedures and the corresponding tables will reside on this server. These tables include the following:

   - Subscription Table: This table will contain all the subscription information from each user and agency about the events that they wish to be notified of.

- Notification Generation Table: When a notification event occurs, data regarding the event (PDID, event, etc) is written to this table.
- Temporary Table: A temporary table is used to compare new and one day old data in order to isolate any changed and/or new data.
- History Table: A history table is used to archive and log events that have occurred.

It is recommended that the Notification Server run on the Windows 2000 Advanced Server operating system, utilizing Microsoft's SQL Server 2000 Relational Database Management System (RDBMS) - or latest versions. A high capacity server should be acquired for the Notification Server.

2. Email Server – The Email Server will be used by Notification Services to email individuals their notifications. It is recommended that the email server run Microsoft's Exchange Server 2000 on the Windows 2000 Advanced Server operating system (or latest versions). The Notification Server will trigger the Email Server to email individual users. A high capacity server should be acquired for email functionality.
3. Active Directory Server – Active directory is a centralized and standardized system that automates network management of user data, security, and distributed resources, and enables interoperation with other directories. It is recommended that Microsoft's Active Directory is used on the Windows 2000 Advanced Server operating system (or latest version). A high capacity server should be acquired to provide this function.
4. JUSTIS Department of Corrections (JUSTISDOC) Server – In order to provide JUSTIS with the entire scope of event notifications noted in the requirements (Escapes and Walk-aways), the DOC must contribute data to JUSTIS. To help facilitate this, it is recommended that a high capacity server is acquired and placed at the DOC to hold JUSTIS DOC data. This server should contain Microsoft's SQL Server 2000 RDBMS on the Windows 2000 Advanced Server operating system (or latest versions).

8. The Future of Notification Services

This document describes a specification for the establishment of a JUSTIS Notification Services solution. The specification was designed to address at a minimum the requirements developed through the JAD sessions, leveraging the existing JUSTIS architecture. This specification was further developed cognizant of potential budget and time constraints. The resultant of these two factors is a solution that provides JUSTIS users notifications of predefined events through a series of well-coordinated and efficient programs.

Leveraging the current JUSTIS architecture is significant to the development of the designed solution. Essentially it is through the use of the agency servers, which act as intermediaries between the Notification Server and the agency operational information system, that support the current design. The batch processing of agency data through JUSTIS allows the use of well-timed stored procedures to initiate the notification process. The “hub and spoke” design of the JUSTIS architecture allows one centralized location for notification processes to be generated.

Agency autonomy and flexibility are extended to the JUSTIS Notification Services through the utilization of the current multi-tiered architecture of JUSTIS. Agencies can continue to make changes to their operational system without causing large-scale program re-writes and infrastructure changes to the JUSTIS Notification Services solution. Figure 3 illustrates the benefits of this multi-tiered design. This layered design to the solution means that a change to the agency’s operational system would cause changes to only interfaces with the operational system.

The design set forth is this document meets the requirements agreed upon in the JAD sessions. However, this design can be enhanced through the use of a messaging oriented middleware or a data transform engine. These tools are designed for directly connecting to the agency operational system. If this circumstance was more prevalent throughout the JUSTIS architecture the most appropriate messaging/data transform engine tool would be recommended.

The following benefits would be provided by the use of a messaging oriented middleware or a data transform engine:

- **Guaranteed Delivery of Notification** – The current design of the JUSTIS Notification Services will provide notifications based upon the data received via batch process data contributions from the agency operational systems. Without the direct connection to the agency operational systems and the complete integration with the use of a proven tool, there remains a risk of either incomplete or incorrect data being contributed to the JUSTIS infrastructure. The JUSTIS Notification Services, as designed, will not distinguish between incomplete and/or incorrect data and therefore cannot guarantee the generation or delivery of a subscribed notification.
- **Data Transfer** – The use of a data transform engine or a messaging oriented middleware makes for ease of integration of data throughout various information

systems. Although the current design of the JUSTIS Notification Services can be extended to support core data transfer, the direct connection to an agency's operational system and the utilization of a tool would ease the development of this functionality.

- **Less Potential Points of Failure** – The current design of the JUSTIS Notification Services involves a number of individual programs that are scheduled and dependent upon each other. The use of individual dependent programs introduces the potential for failure at each program point of dependency. Failure of a program at any one point of dependency could disrupt Notification Services operations. A resolution to this is the application of a messaging oriented middleware or data transformation tool which would reduce the number of individual programs, therefore reducing the dependencies and the associated points of failure.

The enhancement of the solution with the use of messaging oriented middleware or a data transform engine is a value decision for the ITAC to consider. The ITAC consideration should be cognizant of several immediate prevalent factors:

- **Economic** – The use of the aforementioned tools can be costly in both product and configuration cost.
- **Agency Autonomy** – The use of the aforementioned tools may incur some changes to the agency operational system.

9. Assumptions

Notification Services must operate within the boundaries provided by the ITAC, participating agencies and the available technology. There are several assumptions that are inherent in the design in of Notification Services.

- From its inception, JUSTIS has been developed on the principle that the autonomy and mission of each participating agency be unaffected. Notification Services must be considerate of this autonomy.
- Notification Services is currently confined to the DC WAN and operates utilizing specific data transfer and storage technology that enable the process to work.
- Notification Services must be accepted by all participating agencies via ITAC representation.
- All Individual Subscriptions and events are based on an individual's PDID.

10. Appendix

10.1 JAD Session Attendees

The following is the combined list of attendees for the Notification Services JAD Sessions:

Notification Services JAD Session Attendees			
Name	**Agency**	**Phone Number**	**Email Address**
Hans Breville	KPMG Consulting, Inc.	(703) 747-5010	hbreville@kpmg.com
Tony Curington Jr.	KPMG Consulting, Inc.	(202) 533-4664	tcuringtonjr@kpmg.com
James DeCoster	USAO	(202) 514-0495	james.decoster@usdoj.gov
Earl Gillespie	CJCC Council (ITLO)	(202) 727-7862	egillespie@dc.gov
Lee Holdsworth	USAO	(202) 514-7054	lee.holdsworth@usdoj.gov
Dave Kennamer	CJCC Council (SO)	(202) 727-1932	david.kennamer@dc.gov
Frank Nowicki	DCSC	(202) 879-7932	nowickfj@dcsc.gov
Jerry Palombi	KPMG Consulting, Inc.	(703) 747-6148	gpalombi@kpmg.com
Ryan Preston	KPMG Consulting, Inc.	(202) 533-3432	rpreston@kpmg.com
Daniel Cipullo	DCSC	(202) 879-1689	
Stan Cockrell	DCPSA	(202) 585-7992	stanley.cockrell@csosa.gov
Keith Godwin	DOC	(202) 671-2074	keith.godwin@dc.gov
Debbie Grafton	DCSC	(202) 879-1790	graftod@dcsc.gov
Diana Lowery	PSA	(202) 585-7937	diana.lowery@csosa.gov
Vihky Smith	MPD	(202) 727-8663	vsmith@mpdc.org
Karen Wallace	CSOSA	(202) 220-5392	karen.wallace@csosa.gov
Kathleen French	CSOSA	(202) 585-7903`	kathleen.french@csosa.gov
Nancy Gonzalez	USAO	(202) 514-7362	nancy.gonzalez@usdoj.gov
Wendell Holmes	DCSC	(202) 879-1689	
Debra Kafami	CSOSA	(202) 585-7403	debra.kafami@csosa.gov
Steve Kutzer	KPMG Consulting		
Julia Leighton	PDS	(202) 626-8428	jleighton@pdsdc.org
Patty Sucato	PSA	(202) 220-5658	patty.holman@csosa.gov
Demond Tigs	PSA	(202) 585-7020	demond.tigs@csosa.gov

Notification Services JAD Session Attendees			
Name	**Agency**	**Phone Number**	**Email Address**
Lorenzo Vallone	PDS	(202) 626-8402	lvallone@pdsdc.org
Rande Young	CSOSA	(202) 220-5378	rande.young@csosa.gov
Alex Grammar	CSOSA	(202) 585-7317	alex.grammar@csosa.gov
Vidyababu Kuppusamy	KPMG Consulting, Inc.	(202) 727-9611	vkuppusamy@kpmg.com
Jim Morris	CSOSA	(202) 585-7339	jim.morris@csosa.gov

10.2 JAD Session 1 Notes

This meeting was the first of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Notification Services functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

The session began with a welcome and an introduction from James DeCoster, the chairperson of the Notification JAD sessions, followed by introductions from the rest of the attendees. Tony Curington, the JUSTIS Implementation Team Manager, then reviewed the agenda for the session but also emphasized that the JAD sessions were designed for open discussion for all topics related to the specifications of the Notification System. Mr. Curington also gave background on the purpose of a notification system, the potential scope of the system, and the main objectives for a notification system. Finally, Mr. Curington gave a tentative schedule for the upcoming JAD sessions, highlighting the most relevant topics to be covered over the 5 week period.

Earl Gillespie, the Information Technology Liaison Officer then explained some background related to the development of proposal requests for a notification system in the District of Columbia. Mr. Gillespie stressed that the current proposal from KPMG Consulting is only for the definition of design specifications of a notification system, not the development or implementation of the system. Debbie Grafton of the DC Superior Court then remembered having done some work in this area before and asked if research had already been compiled related to the specs of a notification system. Mr. Gillespie recalled 3 working group meetings concerning this topic and offered to supply resulting notes and other relevant materials (see sections 3 and 4). However, Mr. Gillespie asserted that the current Notification JAD sessions should are designed to formulate a more detailed picture of what the Notification Services System entails including an investigation of each agency's current systems and requirements.

Mr. Gillespie then gave the JAD session attendees a description of the history of the Notification Services System, the Statement of Work, and the JUSTIS project as a whole. During this description, Mr. Gillespie set the goals of the JAD sessions as the following:

- To provide the specifications and requirements for the Notification Services System.
- To find out what notification services other agencies already are using.

After that, Mr. Gillespie and Debbie Grafton gave the attendees a brief overview of the Core Data Transfer functionality, which is currently in the implementation phase. Mr. Gillespie noted that the quality and efficiency of the Core Data Transfer can augment the functionality of a future Notification Services System.

Mr. Curington gave a brief overview of the current state of the implementation of Core Data Transfer and stated that Metropolitan Police Department (MPD) was in the process of converting mug-shot photos from a proprietary format to a more accessible format viewable by Oracle, which is the database system being used to process MPD arrest data. Mr. Curington also mentioned that near real time access to MPD's arrest data was close to completion. In addition, Mr. Curington noted that the notification system could only be as good as the data that JUSTIS receives from the agencies.

Mr. Gillespie then asked the attendees to address the notification systems currently being used in the individual agencies (if any). Both USAO and DISC representatives, James DeCoster and Debbie Grafton respectively, were able to provide some insight into notification systems that are currently active. Mr. DeCoster revealed that there are two notification systems operating at USAO, one federal and one local. Both are referred to as Victim Notification Systems. He was able to give some details on the local system, which sends notification letters to victims of crimes. The letters are generated and sent to victims whenever any of the following event changes occur: change in prosecutor, change in disposition, change in scheduled hearing date, change in sentencing, change in bond, addition of victims or witnesses. The system was mandated by Congress in 1999 and activated in January 2001. Anywhere from 100 to 200 letters are mailed each day.

Based on this finding, Mr. Gillespie asked the attendees how MPD was notifying its officers of court date changes. There were no answers from the attendees, but MPD was not represented in the session and this question will be pursued in coming sessions or directly with MPD.

Mr. Gillespie then asked Ms. Grafton to describe any notification data streams coming from DCSC. Ms. Grafton knew of a few such notifications, but was unsure of the mechanism (or manual task) that produced the notifications. For instance, certain categories of convictions such as certain drug convictions and moving violations are sent to the Department of Motor Vehicles (DMV). Also, paper documents are sent to relevant parties when new parolees are entered into the system.

Mr. Gillespie directed the attention of the attendees to the source of warrants. The consensus among the attendees was that most warrants came from DCSC, but that

they were held in WALES, the MPD database. They are entered into WALES by DCSC however.

At the end of the meeting it was agreed that the key to the success of the JAD sessions was to increase the attendance of the members. Key members that were missing were Steve Fezuk from DC Department of Corrections (DOC), Ron Hickey from Pretrial Services Agency (PSA), and Kathleen French from Court Services and Offender Supervision Agency (CSOSA).

10.3 JAD Session 2 Notes

This meeting was the second of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Notification Services functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

The session began with a welcome and an introduction from James DeCoster, the chairperson of the Notification JAD sessions, followed by introductions from the rest of the attendees. Tony Curington, the JUSTIS Implementation Team Manager, then gave a brief review of what a notification system is and the purpose of the JAD sessions.

Essentially, the 3 most fundamental elements of a notification system are events, subscriptions, and the actual delivery of the notification. Mr. Curington emphasized that the JAD sessions serve as a forum for discussion of these elements in order to determine the specifications for a potential notification system in the District. Mr. Curington also added that it is important that each JAD session serve as the forum for specific topics, for example, in the first JAD session, the attendees discussed current notification systems that were active in their respective agencies. In the second JAD session, this topic would also be addressed, but the main focus would be to discuss the events that JAD members would like to have included in the Notification Services specifications.

James DeCoster, the JAD Chairperson briefly reviewed a notification system being used at USAO to notify victims of various changes in their court case. Keith Godwin, of the DC Department of Corrections (DOC) then discussed the DOC's VINES system, which enables users to access the status of detained persons using various information keys such as PDID and name. Information available to the users includes if the person is imprisoned, court hearing dates, among several other items. Users are able to access VINES via the telephone.

Mr. Godwin further explained that the VINES (Victims Notifications Everyday System) system was not a DC based system, but rather a nationwide system used in 35 states. The data is stored in Kentucky, where updated, deleted, or new files are sent every 15 minutes. DOC receives certain information that is contributed to VINES from the DC Superior Court, such as convictions and release orders, in a nightly batch file.

Mr. Godwin then discussed the District Escape Monitoring System, which is a notification system used by DOC. This notification system is designed to alert relevant parties of an escape from one of their facilities, which includes prisons, treatment facilities, and halfway houses. While escapes from the prisons are very rare, offenders will sometimes leave treatment facilities and halfway houses, resulting in the majority of their escapes on record. However, Mr. Godwin also noted that these "escapees" are sometime arrested while legally away from the facility during the day. In these cases, when the detainee does not return to the facility, they are mistakenly processed as escapees. Therefore, DOC would like to be notified of arrests.

Since DOC already has a notification system for escapees, it was determined that DOC should be able to add JUSTIS to its list of subscribers, and then JUSTIS could disseminate the notification to its subscribers, thus providing a notification of escapees.

Mr. Curington then turned the attention of the attendees to establishing the events to be included in Notification Services. It was agreed that all agencies would have access to all data as specified on the current JUSTIS data access table. Therefore, the rules for data access in JUSTIS will simply carry over to Notification Services. After some initial consideration of this topic, a few ideas were discussed. The following table shows what events were agreed upon during the meeting. More ideas for events are pending and are scheduled to be discussed at the third JAD session on July 25, 2002.

Event	Source	Notification Time
Arrest	MPD	15 mins.
Trial Disposition	DCSC	24 hrs.
Supervision Release[1]	DOC, CSOSA	24 hrs.
Trial Date	DCSC	24 hrs.
Escapes (post-trial abscond)	DOC	24 hrs.
Warrants	TBD	TBD

Table 1 – Initial Notification Events

- Mr. Gillespie then turned the attention of the attendees to the origination of warrants. It was determined that there were 3 types of warrants relevant to Notification Services, arrest warrants, escape warrants, and bench warrants. While

[1] JAD attendees were unsure if DOC and CSOSA were the only originators of supervision release data or how often this data could be retrieved. An action item has been committed to determining this information.

attendees were able to say with confidence that bench warrants originated from DCSC's Criminal Information System (CIS) system, there was no consensus on where arrest or escape warrants were originated. It was also determined that Failure to Appear (FTA) charges were criminal offenses and were processed as bench warrants. Attendees agreed that warrants were an important part of the Notification Services system, but more information was needed to determine if and how warrants could be included into the system.

10.4 JAD Session 3 Notes

This meeting was the third of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Notification Services functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

The session began with a welcome and an introduction from Tony Curington, the JUSTIS Implementation Team Manager, followed by introductions from the rest of the attendees. Hans Breville, a member of the implementation team, then gave a brief review of what a notification system is and the purpose of the JAD sessions.

Diana Lowery, of Pretrial Services Agency (PSA) began the session with a series of questions about Notification Services that were compiled by her and other members of PSA. Ms. Lowery began by asking if PSA would be able to choose which events they would like to be notified of, or if it was pre-determined by other factors. In particular, Ms. Lowery mentioned that they probably would not need to be notified of trial disposition changes since they already have access to that information. Mr. Curington responded that the JAD sessions are strictly focused on determining the user requirements and specifications of the system and that the options for the users were only limited by known technical boundaries since development is not being considered at this stage.

It was also noted by Debbie Grafton of DCSC that although PSA may receive trial disposition information, that the Notification Services System would be able to notify individuals of specific data. Ms. Lowery responded that only the Pre-Release branch of the Diagnostic Unit of PSA would be interested in receiving individual notification of arrests.

Ms. Lowery described some of the data operations in PSA, in particular, arrest data procedures. She mentioned that PSA scours PDID data every hour. PDID's pre-selected by PSA members are compared to PDID's in the arrest file. PSA is notified of any matches that are found. Since PSA is already getting PDID notifications on an hourly basis, Ms. Lowery was interested in knowing how often Notification Services would be able to supply this data. Mr. Curington reviewed the terms agreed upon in the previous session, which were that arrest data could be reported in the notification system as often as every 15 minutes.

It was further determined that this time delay was from the electronic booking of the information. The data would be available in JUSTIS Notification Services within 15

minutes of electronic booking. Discussion then ensued as to how MPD enters arrest data. However, without the presence of an MPD representative, an exact determination could not be made. Regardless, the current requirement of 15 minutes after electronic booking is the best possible timeframe, and is more frequent than any option currently available.

The JAD members then discussed the origin of arrest data within MPD. Mr. Curington stated that arrest data is currently coming from CJIS, which will also be the source for Notification Services. Ms. Lowery added that CJIS was a real-time database for arrest data.

Discussion then turned to the source of warrants. Ms. Lowery asked if anyone knew the source of bench warrants in particular. Although there were no obvious answers to this question, Lee Holdsworth of USAO was able to shed some light on this often discussed, and somewhat confusing topic. In short, there is not one source for bench warrants, but rather depending on the court and the jurisdiction, bench warrants originate[2] from a few different sources. For instance, DC Superior Court bench warrants are initially stored in WALES, the MPD database. However, Federal bench warrants issued in the District originate from NCIC.

Concerning arrest warrants, Karen Wallace of CSOSA recommended that MPD's Warrant Squad should be questioned. Ms. Wallace also suggested that Steve Gaffigan might be a good source of information concerning the source of arrest warrants. MPD was not present to expand on this issue, and it will likely be taken up again at the fourth JAD session.

Concerning escape warrants, Mr. Holdsworth stated that most District felony arrest warrants were stored in WALES, but that the originating database was DCSC's Criminal Information System (CIS). The data was not moved to WALES for anywhere from an hour to a day after it is entered into CIS.

Although questions remained as to the source of warrants, Mr. Curington assured participants that if the data is available on a system contributing data to JUSTIS (including WALES, CJIS, PRISM, and CIS), then that data will be available for Notification Services. However, it is important to know when the data can be made available to JUSTIS from these channels in order to offer JUSTIS Notification users the most current data available to them.

Ms. Lowery then turned the attention of the JAD members to the topic of lookouts. Lookouts are a temporary status placed on escaped, or wanted individuals during times of agency inactivity such as weekends and holidays. For instance, if a prisoner escapes on a Saturday, a lookout is placed on the escapee until Monday, when a formal warrant can be issued. The JAD members agreed that this was an important distinction from warrants and that it should be included in the events list.

[2] In this context, "originate" is meant to describe the initial electronic storage of the warrant. It is at this point that the data is considered to be entered into the system and potentially available for electronic transfer.

Furthermore, critically missing persons is another category that was agreed to be added to the list. Critically missing persons can be any person who is considered missing, such as an elderly person or child. As with lookouts, if the data is available to JUSTIS then the data can be included in Notifications Services.

Ms. Lowery then turned the attention of the attendees to supervised releases, which was discussed in the second JAD session. JAD attendees discussed the definition of supervised release and determined that it could be either parole or probation status, and should be defined as such. Therefore, Notification Services should include the event of being placed on parole or probation, and the event of being released from probation or parole.

Ms. Lowery then stated that PSA would like to be notified of parole and probation violation warrants. It was determined by the JAD members that these warrants were stored in NCIC, which is not available to contribute to JUSTIS. However, Kathleen French of CSOSA stated that her agency is also notified of these events, but was unable to say for sure the notification was an electronic or paper method, or how long it takes for CSOSA to be notified. Furthermore, Ms. Lowery expressed that PSA would like to be notified of changes in the Assistant US Attorney for DC Superior Court and US District Court only.

Ms. French then asked if Community Supervision Officers (CSO's) would be able to be notified of the arrest of the people they supervise, and have JUSTIS update their list of supervised people automatically. Since each CSO supervises a long, dynamic list of people, it might be a burden to have to constantly update their list of supervised people for Notification Services. Mr. Curington responded that this should be possible if JUSTIS can have a data dump of the list of supervised people and their respective CSO's on a regular basis.

Mr. Curington finished the meeting by asking members to consider the expiration of notifications from the system. In order to keep the system's data storage from hindering it's own operation (and the DC WAN), it will be necessary to expunge notifications that are no longer in service. Thus, members should consider what the appropriate life span of a notification should be.

Several new ideas for notification were introduced in this JAD session. Below is a list of all events discussed through the third JAD session.

Event	Source	Notification Time
Arrest	MPD	15 mins.
Trial Disposition	DCSC	24 hrs.
Trial Date	DCSC	24 hrs.
Escapes (post-trial abscond)	DOC	24 hrs.
Arrest Warrants	TBD	TBD

Event	Source	Notification Time
Bench Warrants	TBD	TBD
Escape Warrants	TBD	TBD
Parole/Probation Violation Warrants	CSOSA[3]	TBD
Parole Placements/Releases	TBD	TBD
Probation Placements/Releases	TBD	TBD
Lookouts	TBD	TBD
Lookouts - Critically Missing Persons	TBD	TBD

Table 1 – Initial Notification Events

10.5 JAD Session 4 Notes

10.5.1 Intro and Background

This meeting was the fourth of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Notification Services functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

The session began with a welcome from James DeCoster, the chairperson of the JAD sessions. Tony Curington, the JUSTIS Implementation Team Manager, then introduced himself and a new attendee, Steve Kutzer. Mr. Kutzer is working with the implementation team to define specifications for Notifications Services. All attendees then introduced themselves and the discussion began.

Mr. Curington noted that although much progress has been made in the JAD sessions to date, there were still many areas of the system (Notifications Services System) that needed clarification and input from the attendees. Mr. Curington noted that there were several new attendees that should be able to shed some light on the discussion. In particular, the events to be included in the system have yet to be defined and at this late stage of the JAD sessions, it is crucial that the group determine the events today.

[3] Although CSOSA does have this information, it is not known if it will be available to JUSTIS in a timely manner.

10.5.2 Notification Events

Mr. Curington began to go down the list of events from the previous JAD session and asked for an opinion of each one. In particular, it was asked that each member determine if the data is relevant (meaning an agency is interested in receiving notification of the event), and where the data can be obtained. Mr. Gillespie, the Information Technology Liaison Officer stressed that each event should serve at least one agency's needs for notification; otherwise, it should be stricken from the list. The following table is the result of this evaluation:

Event	Data Source	Time	Delivery Method
Arrest	MPD	15 mins.	
Judicial Disposition	DCSC	24 hrs.	
Change in USAO Prosecutor	USAO	24 hrs.	
Change in DC Prosecutor	OCC	24 hrs.	
Change in Defense Counsel	DCSC	24 hrs.	
Trial Date Change	DCSC	24 hrs.	
Escapes	DOC	24 hrs.	
Arrest Warrants	MPD	15 mins.	
Bench Warrants	DCSC	24 hrs.	
Escape Warrants	DOC		
Parole Violation Warrants	CSOSA[4]		
Parole Placements/Releases			

Table 1 - Notification Events

Events removed from the previous list include issuance of lookouts, issuance of probation violation warrants, and probation placements/releases. Lookouts were removed because they are not a legally recognized event and legal action cannot be taken on a lookout. Probation events were removed from the list because probation events are part of bench warrants, which are already on the list.

Moving down the new list, comments were made concerning each event:

[4] Although CSOSA does have this information, it is not known if it will be available to JUSTIS in a timely manner.

All JAD members agreed that **Arrest** events are vital to Notification Services and that MPD holds this data.

Trial Disposition was changed to **Judicial Disposition**, at the request of Julia Leighton, of Public Defender Services (PDS). The new name better reflects the nature of this data, which includes the results of a trial. All members agreed that DC Superior Court (DCSC) is the source of this data.

Change in USAO Prosecutor was determined to be in demand and Ms. Leighton was able to say with some confidence that the US Attorney's Office (USAO) is the source of this data.

Change in DC Prosecutor was determined to be in demand and Ms. Leighton was able to confirm that Office of Corporation Counsel (OCC) is the source of this data.

Change in Public Defender was changed to **Change in Defense Counsel**, at the request of Ms. Leighton. Ms. Leighton also stated that this information is available in DCSC's CIS system and is updated very quickly.

Trial Date Change was determined to be in demand and all members agreed that DCSC was the source of this data.

Escapes were determined to be in demand and all members agreed that the Department of Corrections (DOC) was the source of this data.

Arrest Warrants were determined to be in demand, although the attendees were not able to determine if there was a single source for this data. In the 3rd JAD session, Lee Holdsworth of USAO stated that most District felony arrest warrants were stored in WALES, but that the originating database was DCSC's Criminal Information System (CIS). The data was moved to WALES anywhere from an hour to a day after it is entered into CIS. JUSTIS will capture any arrest warrants stored in WALES or CJIS.

Bench Warrants were determined to be in demand and it was confirmed by Debbie Grafton of DCSC that this data was stored in WALES, the MPD database system.

Escape Warrants were determined to be in demand, however, the source of the data was not clear. Wendell Holmes of DCSC stated that this data was stored in NCIC, a national database not accessible to JUSTIS. But, attendees were unable to confirm if this was the only source for this data.

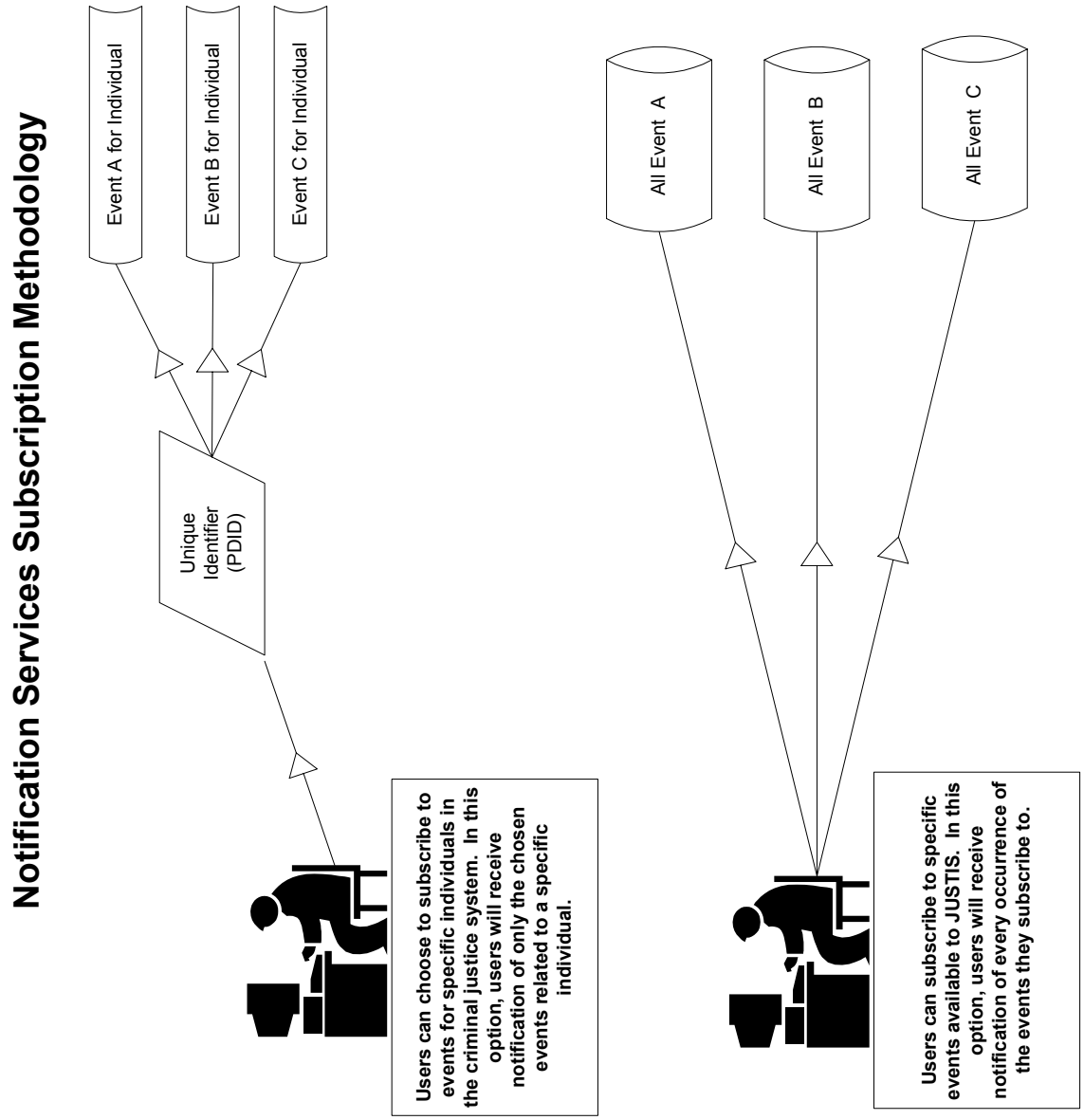
Parole Violation Warrants were determined to be in demand. JAD attendees were unable to say for certain where this data could be obtained, but Debra Kafami of CSOSA agreed to research this topic.

Parole Placements/Releases were determined to be in demand by the agencies. JAD attendees were not sure of the source of this data, but some members were of the opinion that the US Parole Commission (USPC) had access to this data through JABS (Joint Arrest Booking System).

This comprehensive list is agreed upon by all JAD members as the final list of events to be included in Notification Services. However, there still needs to be research done to determine the source for several of the items. This is represented in the Action Items section.

10.5.3 Subscription Methods

With the events list finalized, the discussion moved to subscription methods. Mr. Curington explained that participating agencies would be responsible for creating their own subscriptions on an individual basis. Each individual will be able to log onto JUSTIS and tailor their subscription services to their liking. Users will be able to choose events that they would like to be notified of, or events tied to a specific individual's PDID, or a combination of both. The two basic options are illustrated in the diagram on the following page.


Notification Services Subscription Methodology
Event A for Individual
Event B for Individual
Event C for Individual
Unique Identifier (PDID)
Users can choose to subscribe to events for specific individuals in the criminal justice system. In this option, users will receive notification of only the chosen events related to a specific individual.
All Event A
All Event B
All Event C
Users can subscribe to specific events available to JUSTIS. In this option, users will receive notification of every occurrence of the events they subscribe to.

However, there is a special subscription situation where an entire agency needs to be notified of events, which are specific to a dynamic group of PDID's. CSOSA is one such agency that would like this functionality for their CSO's, each of whom have to monitor the activity of many (in some cases hundreds) of individuals. Therefore, Notification Services could be designed to automatically update their list of PDID's based on the agency's contribution of a current list of PDID"s monitored for each CSO, with a unique identifier for each CSO. JUSTIS will then be able to notify each CSO of the events tied to any one of their PDID that they're responsible for.

Upon hearing this functionality, attendees from PDS expressed interest in the same service. PDS would like to have public defenders notified of information related to the cases that they are responsible for – specifically arrests of defendants. The details of this service were not discussed, but it was determined that there may be more opportunity to use this type of service and that further discussions with PDS should be held.

Mr. Gillespie then reminded PDS attendees that they are not legally entitled to MPD data under DC law and may not be able to get access to arrest data.

Mr. Kutzer then asked the members if there might be a need for more detailed notification, such as notification of certain types of arrests, for instance arrests in certain geographical areas or of certain people that speak a foreign language. JAD attendees did not express the need for this level of detail in their notifications.

10.5.4 Expiration of Subscriptions

Mr. Gillespie then asked that all attendees consider an expiration time for the subscriptions. He expressed that it was important for subscription to expire since a build-up of active subscriptions over time will overburden the information systems storing and transporting the data. It was agreed that one year was a good default expiration time period, but that users would also be able to choose a shorter expiration period as an option.

Members agreed that it would be beneficial to have a notification warning before the subscription was retired so that users could have a chance to re-new their subscriptions if they needed to do so. Members also added that an unintentional benefit of this feature is that the expiration warning may possibly serve as an effective reminder to the user of an issue that may require their attention.

10.5.5 Group vs. Individual Subscriptions

The discussion then turned to group versus individual subscriptions. In this context, "group" means that an agency will receive notifications of every event that occurs. For instance, DCSC expressed interest in being notified of every change of USAO and DC prosecutors. An individual subscription will only notify users of events relevant to selected PDID numbers. In the meeting, an effort was made to

determine which events would need to be subscribed as a group, and which would need to be subscribed as individual.

The following table will be sent to all participating agencies to determine which events will need to be subscribed as a group versus individual or both.

Event	Individual	Group	Both
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			

Table 2 – Group vs. Individual Notification Table

10.5.6 Notification Channels and Content

The next discussion of the JAD session surrounded what data would be included in the actual notification. While attendees expressed interest in receiving the information related to the actual event in the notification[5], Mr. Curington was concerned that such information would not be kept secure over email, voicemail, or any of the other possible notification channels. Mr. Curington stated that the notification would most likely include a message that an event had taken place, but not any of the related details. Users would then have to log into JUSTIS to get the details of the event.

The final discussion of the JAD session involved the notification channels that would be used. Mr. Gillespie narrowed this down to three possible choices - email,

[5] For instance, in an arrest notification, the subscriber would receive an email message saying who was arrested on what charges, etc.

phone, and text messages. By default, the notification will be included on the JUSTIS Notification website as well.

10.6 JAD Session 5 Notes

10.6.1 Intro and Background

This meeting was the fifth of 5 scheduled Joint Application Design (JAD) sessions to discuss and develop the requirements for the JUSTIS Notification Services functionality. The JUSTIS Implementation Team coordinated the JAD discussions and provided relevant materials.

The session began with a welcome from James DeCoster, the chairperson of the JAD sessions, followed by a brief introduction of each of the attendees. Earl Gillespie, the Information Technology Liaison Officer then thanked the implementation team for their efforts in making the JAD sessions productive.

10.6.2 Notification Events

Patty Sucato of Pretrial Services Agency (PSA) began the discussion by noting that PSA would like to receive individual notifications of walkaways. When an individual leaves a treatment facility and does not return in the evening, it is considered a walkaway. The DC Department of Corrections (DOC) will provide a source for this data.

10.6.3 Subscription Methods

Tony Curington, the JUSTIS Implementation Team Manager then asked all agency representatives to submit their choices for subscription methods. All agencies have the option of choosing to subscribe to any of the of agreed upon events, and if they would prefer individual, group or both methods of notification for each event chosen. The following tables are the submitted choices from each agency to date, however, DOC, MPD, PDS, OCC, USPC, and YSA have yet to submit their choices.

CSOSA			
Event	**Individual**	**Group**	**Both**
Arrest	X		

CSOSA			
Event	**Individual**	**Group**	**Both**
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change	X		
Escapes	X		
Arrest Warrants	X		
Bench Warrants	X		
Escape Warrants	X		
Parole Violation Warrants	X		
Parole Placements/Releases	X		
Walkaways			

DOC			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			

DOC			
Event	**Individual**	**Group**	**Both**
Parole Placements/Releases			
Walkaways			

DCSC			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor		**X**	
Change in DC Prosecutor		**X**	
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

MPD			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			

MPD			
Event	**Individual**	**Group**	**Both**
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

PDS			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

PSA			
Event	**Individual**	**Group**	**Both**
Arrest		X	
Judicial Disposition	X		
Change in USAO Prosecutor	X		
Change in DC Prosecutor	X		
Change in Defense Counsel			
Trial Date Change			
Escapes	X		
Arrest Warrants	X		
Bench Warrants	X		
Escape Warrants	X		
Parole Violation Warrants	X		
Parole Placements/Releases	X		
Walkaways	X		

OCC			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			

OCC			
Event	**Individual**	**Group**	**Both**
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

USAO			
Event	**Individual**	**Group**	**Both**
Arrest	**X**		
Judicial Disposition	**X**		
Change in USAO Prosecutor	**X**		
Change in DC Prosecutor	**X**		
Change in Defense Counsel	**X**		
Trial Date Change	**X**		
Escapes			**X**
Arrest Warrants	**X**		
Bench Warrants	**X**		
Escape Warrants	**X**		
Parole Violation Warrants	**X**		
Parole Placements/Releases	**X**		
Walkaways			

USPC			
Event	**Individual**	**Group**	**Both**
Arrest			

USPC			
Event	**Individual**	**Group**	**Both**
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			
Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

YSA			
Event	**Individual**	**Group**	**Both**
Arrest			
Judicial Disposition			
Change in USAO Prosecutor			
Change in DC Prosecutor			
Change in Defense Counsel			
Trial Date Change			
Escapes			
Arrest Warrants			
Bench Warrants			
Escape Warrants			

Parole Violation Warrants			
Parole Placements/Releases			
Walkaways			

10.6.4 Warrants and Parole Placements/Releases

Representatives from Court Supervision and Offender Services Agency (CSOSA), Jim Morris and Alex Grammar then introduced documentation describing the origination and process flow of warrants and parole placements/releases. Warrants and parole placements/releases had been discussed in detail in the previous JAD sessions, but many questions concerning their origin and processing were still left unanswered. The following is an excerpt taken directly from the submitted CSOSA document that sheds some light on these questions.

WARRANTS

All parole and probation warrants for offenders under the supervision of Court Services and Offender Supervision Agency (CSOSA) are processed and served by the United States Marshals Service (USMS). CSOSA staff receive written notification of warrants and enter them into CSOSA's SMART database system.

Parole Warrants

Parole warrants are issued by the United States Parole Commission upon the request of a CSOSA community supervision officer. The United States District Court Marshals Office enters parole warrants into NCIC and WALES.

Supervised Release Warrants

Supervised release warrants are handled similar to parole warrants.

Probation Warrants

Probation warrants are issued by a Superior Court judge upon the request of a CSOSA community supervision officer. The Superior Court Marshals Office enters probation warrants issued by a judge, through the Warrants Office for the Courts, into WALES and/or NCIC, depending on the type of alleged violation:

Probation Misdemeanor Warrants are entered into WALES.

Probation Felony Warrants, which are extraditable, are entered into WALES and NCIC.

Bench Warrants

CSOSA staff receive a faxed list of executed parole warrants from the United States District Court Marshals Office on a daily basis. CSOSA does not receive notification of executed probation warrants.

PAROLE PLACEMENTS/RELEASES

CSOSA receives Notices of Actions (NOAs) from the USPC regarding incarcerated offenders pending parole or supervised release. These NOAs provide information such as projected dates of release for offenders and denials of parole. This information is entered into the SMART database system. CSOSA also regularly receives from the Bureau of Prisons a list of sex offenders who are within six months of release. In addition, CSOSA receives a memorandum from the United States Attorney Office's Criminal Intelligence Unit listing BOP releases to the District of Columbia on a bi-weekly basis. The contact for this list is Shannon Alexis, (202) 353-8813, Shannon.M.Alexis@usdoj.gov. This list manually is reviewed to determine which offenders did or did not report to CSOSA within 72 hours of release. The SMART database system is updated, accordingly. Offenders who do not report are assigned to Community Supervision Officers, and appropriate action is taken.

JAD session attendees recognized the effort made by Debra Kafami of CSOSA and expressed gratitude for helping the JAD sessions in a difficult topic area.

10.6.5 Timing of Notifications

Following the distribution of this documentation, Mr. Curington and Mr. Gillespie opened the discussion with the topic of the timing of notifications. In particular, Mr. Curington expressed a desire to avoid duplicating notification information. In other words, the JUSTIS Notification Services should not notify an agency or employee of information that they can get from another source in a more efficient manner. Mr. Gillespie mirrored this concern and also added that it was vital to establish the timing of notifications based on the timing of current agency data flows to maximize the value of the system.

10.6.6 The User Interface and Functionality Demonstration

The previous JAD sessions covered a great deal of topics related to Notification Services, and although many details are yet to be determined, a final product has

taken shape over the past 5 weeks. In the fifth JAD session the implementation team introduced a user interface that was the product of input from all JAD session members. The fifth JAD session served as an opportunity to review, critique, and revise the prototype interface.

The interface prototype consists of essentially 3 web pages that allow users to view notifications, add new subscriptions to notifications, and manage their current subscriptions. JAD session attendees were shown a working demonstration of these web pages with links showing the potential functionality with each page. As the implementation team demonstrated the interface, JAD session attendees provided their input and ideas to improve the initial design of the interface and other parts of the notification system. Many valid comments were made, but for purposes of brevity and significance, only changes impacting the functionality of the interface and operation of the system will be listed here.

- The original design allowed users to respond to the JUSTIS Help Desk to confirm receipt of a notification, or to voice a concern about the notification system. It was agreed that this functionality was not necessary since users already have a legal obligation to confirm knowledge of an event. While some attendees wished to use the confirmation as a management tool, Mr. Gillespie refuted this idea because of the complexity it would add in trying to determine and manage the rights to access other user's notifications. However, it was agreed that the system should maintain a log of all sent notifications in order to maintain a check of the system.

- All attendees agree that repeat notifications were not necessary. Notifications will be sent once, and only once to each user subscribed to an event.

- Users agreed that the content of the initial notification (email or text message) should only include the type of event that the user is being notified of. More detailed information will be retrieved from the Notification Services application on the JUSTIS website.

- On the JUSTIS website, users will see their notifications identified by the PDID of the individual associated by the event. It was determined that although PDID's are not a perfect method for identifying individuals, it was the best available identification available.

- Notifications will be sent via email and/or text message only. No phone notifications will be made available. Phone messages were determined to be too high a security risk.

- Group subscriptions will be shown on the Notification Services homepage as a message referring the user to his/her agency representative that handles the internal distribution of group notification data. The group notification will not be made immediately available to the end user through the Notification Services interface.

- Users will be able to choose a range of expiration period for each subscription. The default was determined to be 1 year, but shorter options should be available as well.

- Each user will be able to confirm and edit their notification email. The interface will also allow the user to overwrite their JUSTIS email on the user database, if their primary email should change. The system will allow for the distinction between the notification email and their primary JUSTIS email.

- Users will be able to search their subscriptions by PDID in order to quickly find and manage individual subscriptions.

- When users subscribe to new events, they will have the option of choosing a timeframe for which they would like to keep the notification active (as discussed above) and they will also be able to limit the number of notifications they receive for that particular subscription. For instance, a user can choose either "1 time" if they only want to receive a notification once, and then have it cancelled. Or, the user can choose "unlimited" to receive all events that occur over the specified time period.

Overall, users were very pleased with the interface and its design. With the above-mentioned changes and other cosmetic alterations, the interface will be close to its final form.

10.6.7 End of JAD Sessions for Notification

The fifth and final JAD session for Notification Services ended with congratulations to everyone for contributing their time, ideas, and information that helped to make the sessions a success. A few open issues and action items will be pursued on an individual basis with the relevant parties